Service Date: May 12, 1983

DEPARTMENT OF PUBLIC SERVICE REGULATION
BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MONTANA

* * * * *

IN THE MATTER of the Application by MONTANA POWER COMPANY for authority to establish increased rates for electric service in the State of Montana.	)))))	UTILITY DIVISION DOCKET NO. 82.8.54 ORDER NO. 4938a

APPEARANCES

FOR THE APPLICANT:

Dennis R. Lopach, Attorney at Law, Hjort, Lopach, and Tippy, Box 514, Helena, Montana 59624-0514, appearing on behalf of the Applicant

Pamela K. Merrell, Attorney at Law, 40 East Broadway, Butte, Montana 59701, appearing on behalf of the Applicant

FOR THE PROTESTANTS:

James C. Paine, Montana Consumer Counsel, 34 West Sixth Avenue, Helena, Montana 59620, appearing on behalf of the consuming public of the State of Montana

John Allen, Consumer Counsel Staff Attorney, 34 West Sixth Avenue, Helena, Montana 59620, appearing on behalf of the consuming public of the State of Montana

FOR THE INTERVENORS:

Linwood A. Morrell, Attorney at Law, Chadbourne, Parke, Whiteside, and Wolff, 30 Rockefeller Plaza, New York, New York 10112, appearing on behalf of Champion International Corporation and Conoco, Inc.

C. W. Leaphart, Jr., Attorney at Law, The Leaphart Law Firm, 1 North Last Chance Gulch, #6, Helena, Montana 59601, appearing on behalf of Champion International Corp., and Conoco, Inc.

James A. Robischon, Attorney at Law of the firm of Poore, McKenzie, Roth, Robischon and Robinson, PC, 1341 Harrison, Butte, Montana 59701, appearing on behalf of the Anaconda Company and Stauffer Chemical Company

John C. Doubek, Attorney at Law, Small, Hatch, Doubek, and Pyfer, 314 Fuller Avenue, Helena, Montana 59601, appearing on behalf of the Montana Irrigators, Inc.

Charles Kuether, Attorney at Law, P.O. Box 2229, Great Falls, Montana 59403, appearing on behalf of the Great Falls Gas Company

FOR THE COMMISSION:

Eileen E. Shore, Staff Counsel
Eric N. Eck, CPA, Chief of Revenue Requirements
Michael L. Foster, Rate Analyst
Michael H. Lee, Economist

BEFORE:

THOMAS J. SCHNEIDER, Chairman
JOHN B. DRISCOLL, Commissioner
HOWARD L. ELLIS, Commissioner
CLYDE JARVIS, Commissioner
DANNY OBERG, Commissioner

FINDINGS OF FACT

PART A

GENERAL

1. On August 11, 1982, the Montana Power Company (MPC, the Company or Applicant) filed with the Commission its application for authority to increase rates and charges for electric service. The proposed rates are designed to produce an increase in annual gross operating revenues in the amount of $52,947,598, based on a historic test year ending December 31, 1981, adjusted for known and measurable changes. During the hearing, MPC adjusted their requested revenue increase to $47,584,676, pursuant to exhibits supporting that figure which reflect certain adjustments proposed by other parties and agreed to by MPC.

2. On August 13, 1982, the Commission issued a Notice of Application and Notice of Prehearing Conference. On October 13, 1982, pursuant to this conference held September 29, 1982, the Commission issued a Procedural Order.

3. The Montana Consumer Counsel (MCC) has participated in this Docket on behalf of electric utility customers since the inception of these proceedings.

4. On September 2, 1982, Applicant filed an application subject to rebate, for interim rate relief in the amount of $34,102,338. On October 19, 1982, the Commission granted MPC interim revenue relief in Order No. 4938 in the amount of $33,001,060.

5. On November 16, 1982, the Commission issued a Notice of Commission Action which stated that at its November 15, 1982 agenda meeting, the Commission voted to limit rate design for Docket No. 82.8.54 to MPC's interruptible rate proposal and street lighting proposal.

6. On November 24, 1982, the Commission issued an Amended Procedural Order.

7. On January 6, 1983, the Commission issued a Notice of Public Hearing in Docket No. 82.8.54.

8. On February 1 through 11, 1983, pursuant to the Notice of Public Hearing, a hearing was held in the Department of Highways Auditorium and in the Coach House East, Helena, Montana.

9. Applicant proposes the year-ended December 31, 1981, adjusted for known and measurable changes, to be used as the test period in this Docket.

10. The proposed year-ended 1981 test period is found by the Commission to be a reasonable period within which to measure Applicant's electric utility revenues, expenses, and returns for the purpose of determining a fair and reasonable level of rates for electric service.

PART B

RATE OF RETURN

Capital Structure

11. Applicant's witness, Mr. Frank Woy, in his original testimony presented an allocated electric utility capital structure at December 31, 1981, adjusted for the April 1982, sale of common stock. In his rebuttal testimony, Mr. Woy presented the allocated electric utility capital structure at September 30, 1982, adjusted for the November, 1982, and January, 1983, sales of common stock as known and measurable changes.

12. Applicant proposed the following capital structure and associated costs (MPC, Exh. FVW-3, p. 1 of 5).

Description	Ratio	Cost	Weighted Cost
Long-Term Debt	52.79%	10.28%	5.43%
Preferred Stock	9.53	8.52	.81
Common Stock	37.68	17.50	6.59
Total	100.00%		12.83%

13. Dr. Caroline Smith, who presented expert testimony for the Montana Consumer Counsel, used the end of the period capital structure at September 30, 1982, adjusted to eliminate nonutility and gas operations. Dr. Smith also included in her proposed capital structure the unamortized gain on reacquired debt at zero-cost. (MCC Exh. 2, pp. 63, 65-66)

14. MCC proposed the following capital structure and associated costs (MCC Exh. CMS-1):

Description	Ratio	Cost	Weighted Cost
Long-Term Debt	57.97%	10.28%	5.96%
Preferred Stock	9.50	8.52	.81
Common Stock	32.48	13.40	4.35
Unamortized Gain	.05	0.00	0.00
Total	100.00%		11.12%

15. Mr. R. Bruce MacGregor, an expert witness for Champion International Corporation and Conoco, Inc. (CICO), replaced Mr. Thomas O'Rourke as a witness and adopted his testimony. Mr. MacGregor proposed the following adjustments to MPC's capital structure:

1) Removal of Colstrip construction trust debt from capital structure;

2) Exclusion of the post-test year sale of common stock from capital structure;

3) Inclusion of short-term debt in capital structure.

In general, Mr. MacGregor recommended using 1931 test year capitalization, unadjusted for subsequent events. He also used the 17.5 percent common equity return proposed by MPC as he made no study of a proper common equity for MPC. In doing so, Mr. MacGregor did not intend the use of MPC's common equity return figure to be interpreted as support for that return. (CICO Exhs. 2 & 3, pp. 3-7).

16. CICO proposed the following capital structure and associated costs (CICO Exh. 3, Exh. TJO-7 and TR, Vol. III, p. 319):

Description	Ratio	Cost	Weighted Cost
Long-Term Debt	49.3%	9.59%	4.73%
Preferred Stock	11.4	8.53	.97
Common Stock	32.6	17.50	5.71
Short-Term Debt	6.7	12.00	0.80
Total	100.0%		12.21%

Allocation

17. A primary difference between the capital structures proposed by Mr. Woy of MPC and Dr. Smith of MCC is the result of the factors used to allocate utility capital between electric and gas operations. Dr. Smith used an 83.13 percent allocation factor for electric operations and bases her methodology on Order No. 4834c, Docket No. 81.7.62, in a Montana-Dakota Utilities Company gas case. Dr. Smith followed the allocation methodology set forth in Finding of Fact No. 55 on page 21 of Order No. 4834c (MCC Exh. 2, pp. 64-65). Mr. Woy used an 82 percent allocation factor for electric operations in his updated capital structure shown on MPC Exhibit FVW-3, pages 1 and 2 of 5. The Company followed the capital allocation procedure approved by Commission Order No. 4775b in Docket No. 81.6.57 (MPC Exh. 2, p. FVW-5).

18. The Commission recognizes that Dr. Smith is proposing that there should be a uniform system of allocation for MPC and Montana-Dakota Utilities (MDU). Mr. Woy, on the other hand, advocates that consistency should be maintained: "It is important that the basis for this

allocation be consistent so that inequities do not arise affecting one or the other utility department" (MPC Exh. 2, p. FVW-6). The Commission feels that, in this particular case, the concept of consistency of allocation within the individual utility best safeguards against the undesirable possibility of some data "falling between the cracks." The allocation procedure approved by the Commission in the aforementioned MDU case was the proper methodology for that particular set of conditions. The Commission, therefore, finds the allocation factors proposed by MPC in determining capital structure to be proper in this proceeding.

19. During this Docket's hearing, Mr. Paine of MCC questioned Mr. Woy concerning the application of the allocation factors to the capital structure:

> Q. Would you agree that the ($)234,837 shown in the Footnote 3 (of Exh. FVW-1, p. 2 of 5) attributable to electric share of the allocable ($)326,366 represents only 72 percent of that allocable debt?
>
> A. I didn't make that calculation.
>
> Q. Would you accept that?
>
> A. Yes, I would.
>
> Q. So while we have an allocation factor for electric operations of 78 percent, you have allocated only 72 percent of the allocable debt to electric operations; is that correct?
>
> A. Assuming that your arithmetic is right, yes, that's correct. (TR, Vol. II, p. 515)

20. Upon examination of Exh. FVW-3, p. 2 of 5, which is an update of Exh. FVW-1, p. 2 of 5, the Commission determined that MPC had applied the allocation factors to long-term debt in a manner similar to that shown on Exh. FVW-1, p. 2 of 5. Footnote 5 of Exh. FVW-3, p. 2 Of 5 shows MPC's method of applying the allocation factors to long-term debt. Summarily, MPC multiplied Total Debt ($547,135,000) times the allocation factor (82%), and then subtracted the Electric Identified Debt ($164,421,000) from the multiplication product to determine the electric portion of Allocable Debt ($284,230,000). MPC's ratio of electric allocable debt ($284,230,000) to

total allocable debt ($380,340,000) is approximately 75 percent. (MPC Exh. 2, Exh. FVW-3, p. 2 of 5)

21. Although the Commission agrees with the allocation factors determined by MPC and discussed in Finding of Fact No. 18, the Commission disagrees with the Company's method of application of those factors to the components of the long-term debt portion of the capital structure. Rather than multiplying the total debt times the factor, the Commission finds it appropriate to multiply the allocable long-term debt times the factor, and then to add that product to the directly assignable electric long-term debt. MPC's method, in effect, served to allocate the directly assignable electric long-term debt as well as the allocable long-term debt. The Commission does not agree with the concept of allocating directly assignable long-term debt, and, therefore, the Commission finds the preferred method of allocating long-term debt, as described earlier in this Finding of Fact, to be proper in this proceeding.

Construction Trust Debt

22. Mr. MacGregor, expert witness for CICO, proposed as an adjustment to capital structure the exclusion of construction trust debt. He stated in his testimony:

> When a trust is used to capitalize interest, the trust debt should be excluded from the rate of return computation. By including this debt the Company has overstated its rate of return requirements.... The embedded interest cost in this MPC filing includes $44,964,000 of trust financed debt capital in calculating the 10.48% cost for long term debt capital as shown on MPC's Exhibit FVW-1. As a result, the interest upon trust construction expenditures is recovered twice, once by capitalization in the trust and a second time through the return computation. (CICO Exh. 2, p. 3)

MacGregor proposed the following:

> The adjustment I made reduced CWIP by the amount of the construction trust and eliminated those funds from capitalization prior to determining the capital structure. This has the effect of assigning a capital structure to CWIP which has a lower proportion of equity than that assigned to rate base. (CICO Exh. 3, p. 6)

23. Mr. Woy of MPC, in his rebuttal testimony, challenged MacGregor's proposal:

> The fact that we established a trust as the financing vehicle should not influence or call into question the validity of the debt obligation of the MPC or the costs associated with that debt.... The construction trust is a debt obligation of the Company and as such is included in our capital structure and in our embedded debt costs as set forth in my testimony.... It does provide a source of funds to pay the interest cost of the trust, and thus far we have elected to draw the funds from this trust, but it does not relieve the Company of any debt or debt service responsibility. ... I believe it is appropriate to include the construction trust debt in the capital structure to arrive at the overall cost of capital of the electric utility. (MPC Exh. 2, pp. 17, 18, 23)

24. After careful analysis, the Commission feels that there is not adequate justification for including construction trust debt in MPC's capital structure. This particular financial arrangement has characteristics differing from most long-term debt in that interest is usually paid during the life of the debt instrument at regular intervals. In contrast, because of the way this construction trust is structured, MPC is not actually paying currently the interest on the debt. Since MPC is not paying the interest currently, the Company will not suffer by the exclusion of the construction trust debt from capital structure. MPC is financially protected because when the constructed plant goes into service, the Company will recover costs through rate base treatment since, in the meantime, interest on the construction trust will have been capitalized. The Commission, therefore, determines the exclusion of construction trust debt from capital structure to be proper in this proceeding.

Short-Term Debt

25. CICO witness MacGregor proposed to include short-term debt as a component of capital structure "as it is significantly and routinely used for financing purposes" (CICO Exh. 3, p. 6). Mr. MacGregor pointed out that in this filing short-term debt was treated largely as an offset to CWIP rather than as a part of capitalization. He stated:

> That (treatment) may be valid if short-term debt is truly transitional and is not regularly and routinely required. MPC does not meet those criteria. For example, short-term debt was over $50 million at the

> beginning of the Test Year and over $58 million at Test Year end. (CICO Exh. 3, p. 6)

26. MPC witness Woy disagreed with Mr. MacGregor's proposal. He commented:

> During a period of major construction, capital requirements are heavy and short-term debt may reach levels higher than would ordinarily be expected in periods when the financial market conditions are particularly volatile or relatively unattractive.... By excluding the short-term debt from the Company's capitalization we recognize that this debt may be soon funded by either debt or equity securities and that over a period of time the Company will maintain its capitalization in the approximate objective ratios of 50 percent debt and 50 percent common and preferred equities. I believe this is a valid concept and properly recognizes the role short-term debt plays in our Company's capital strategy, and in determining the cost of capital for establishing utility rates.
>
> (MPC Exh. 2, pp. FVW-24-25)

27. During cross-examination of Mr. MacGregor by Mr. Lopach of MPC, a discussion was held concerning MPC's adherence to the FERC formula for determining the proper amount of AFUDC (Allowance for Funds Used During Construction) (TR, Vol. III, pp. 348-355). During that discussion, Mr. MacGregor acknowledged that his approach could result in a double recovery. (TR., Vol. III, pp. 351, 353)

28. The Commission recognizes the importance of short-term debt in the Company's overall financial picture and feels that the current ratemaking procedure for short-term debt, involving an AFUDC computation, best reflects the nature of this type of financing while eliminating the possibility of double recovery. The utility plant instructions in the uniform system of accounts defines interest during construction, or AFUDC, as "the net cost for the period of construction of borrowed funds used for construction purposes and a reasonable rate on other funds when so used." AFUDC is capitalized as an element in the cost of construction work in progress (CWIP) and credited to income in lieu of allowing in current revenues a return on investment in construction work before the plant goes into service. Capitalized AFUDC is, therefore, included as an element of the utility plant portion of rate base. This AFUDC procedure results in relieving present customers of the utility from providing a return on investment in construction work in progress and shifts

responsibility for providing such a return on capitalized AFUDC to future customers who will receive service from the completed facilities. The Commission, therefore, consistent with previous Commission decisions, finds the exclusion of short-term debt from MPC's capital structure to be appropriate in this proceeding.

Unamortized Gain on Reacquired Debt

29. As part of her proposed capital structure, MCC witness Dr. Smith included unamortized gain on reacquired debt as a zero-cost capital item. Dr. Smith explained her proposal:

> I have amortized the existing gain balance against interest costs. The unamortized balance is a zero-cost capital source to the Company, similar to deferred taxes, and has been included in capital structure. (MCC Exh. 2, pp. 65,66)

Dr. Smith stated that as an alternative approach, "Deduction of the electric jurisdictional share from rate base would also be acceptable." (MCC Exh. 2, 1 p. 66)

30. MPC witness Woy disagreed with Dr. Smith's proposal of including the aforementioned gain in capital structure. Mr. Woy testified the following:

> Unamortized gain on reacquired debt is classified under the Uniform System of Accounts as a deferred credit and should not be included as a component of capitalization.... If this item were to be included in the capital structure it would be appropriate to also include the unamortized debt expense, which is recorded as a deferred debit on the balance sheet.... My recommendation, however, is that neither of these items be included in the capital structure. (MPC Exh. 2, p. FVW-9)

31. The Commission agrees with Dr. Smith that the unamortized gain has some similarity to deferred taxes for ratemaking purposes. In previous decisions, the Commission has treated deferred taxes as a rate base reduction rather than as a zero-cost capital item (example: Order No. 4928a in Docket No. 82.4.28). Including deferred taxes in capital structure at zero cost produces about the same result as deducting the amount from rate base. However, this Commission has consistently indicated a preference for the rate base reduction approach because the tax accruals are used to acquire assets. Similar logic applies to the treatment of unamortized gain on reacquired debt

as this gain would be used to acquire assets. The Commission finds, therefore, that the unamortized gain on reacquired debt should be treated as a deduction from rate base in the amount of $195,000, rather than as a zero-cost capital item.

Updating

32. CICO witness MacGregor recommended using 1981 test year capitalization unadjusted for subsequent events. Mr. MacGregor comments:

> A variety of factors may have changed since the test year which affect capital structure per se and its relationship to the assets it supports - such as rate base and CWIP. Simply because the common stock sale is known and certain does not justify its selective inclusion, if at the same time other known and measurable changes are excluded.... In this instance we do not have available all data as to all known and measurable changes since the test year. Accordingly, we conclude that the proper treatment from among the alternatives is, in this instance, to exclude the common stock sale from the calculations altogether. (CICO Exh. 3, p. 5)

33. MPC witness Woy commented that MacGregor's position is not consistent with procedures followed by the Commission in recognizing significant adjustments for known and measurable changes after the test year. Woy stated, "Changes which affect the permanent capital and associated capital costs of this Company are important elements in establishing the cost of capital upon which our future electric utility rates will be based." (MPC Exh. 2, pp. FVW-22,23)

34. Consistently in the past the Commission has viewed the updating cf capital structure and costs as valid known and measurable changes. MPC's filing included many known and measurable changes since the end of the test year, and this is common procedure in rate cases before this Commission. The Commission has allowed several updates in such areas as labor expense and rate base to reflect what has actually happened and what are the current conditions. Since the rates which result from this Order will be in effect in the future, the Commission believes that the updating of capital structure and costs reflects financial conditions of MPC which will closely coincide with such

conditions when the new rates go into effect. The Commission, therefore, determines the updating of capital structure and costs to be proper in this proceeding.

Revolving Credit and Common Stock

35. In his updated capital structure, Mr. Woy made an adjustment of $27 million for the reduction of revolving credit debt reflecting the use of the proceeds from the recent sale of common stock as a known and measurable change. (MPC Exh. 2, p. FVW-7)

36. Dr. Smith used the revolving credit figures for September 30, 1982, and did not adjust them to reflect the usage of the proceeds from the common stock sale because she did not include any changes in her capital structure after September 30, 1982. Smith commented, "Because it is obviously not cost beneficial to replace debt with common equity capital, it is reasonable to expect additional debt financing as well." (MCC Exh. 2, p. 65)

37. Cross-examination of Mr. Woy by Mr. Paine yielded the following:

> Q. If I may characterize your response to Mr. Morrell, you indicated that the Company decided to pay down on that revolving credit balance by issuing common stock because it wanted to arrive at a more favorable equity ratio?
>
> A. That is correct, at a time when it appeared that we were going to be able to get about book value for our stock ... we were trying to move into those capital ratio objectives by selling common stock.
>
> * * *
>
> Q. ...[I]n this instance you chose to pay off some relatively cheap sources of debt. Isn't that correct?
>
> A. The relatively cheap sources of debt were maturing within two or three days of the security sale. It was anybody's guess in advance what those rates were going to do. (TR, Vol. II, pp. 492-493, 495)

38. In past cases the Commission has consistently desired an updated capital structure, which is what Mr. Woy has presented by including post September 30, 1982, issues of common stock. Dr. Smith's argument to exclude the November and January issues of common stock (and thus make no adjustment to revolving credit) because it is not cost beneficial to replace debt with

common equity ignores the reasons given by MPC for this transaction. The Commission feels that the Company's justification for using the proceeds from the common stock issuances to pay off the rapidly maturing sources of debt, as discussed in Finding of Fact No. 37, are valid. The sale improves the Company's capital ratios, and there was some uncertainty as to what the interest rates would be when the debt matured. The Commission also feels that in making sales of common stock at a price near book value benefits both MPC and its ratepayers. Accordingly, the Commission feels that the Company properly adjusted its exhibits to reflect the issuance of common stock and the resulting reduction of revolving credit. The Commission, therefore, finds the inclusion in capital structure of the November, 1982 and January, 1983 issues of common stock and the reflection of the resulting reduction of the Revolving Credit, as proposed by the Company, to be appropriate in this proceeding.

Cost of Capital

Long-Term Debt

39.According to Mr. Woy of MPC, the major differences in the long-term debt portion of his capital structure and that proposed by Dr. Smith are disagreement in allocation factors (as discussed in Finding of Fact Nos. 17 and 18) and a use of estimates rather than actual updated data (MPC Exh. 2, p. FVW-7).

40. In accordance with Finding of Fact Nos. 18 and 24, the Commission has adjusted the Company’s proposed long-term debt ratios and costs to reflect proper allocation and the elimination of construction trust debt from capital structure. Having made these adjustments, the Commission finds 10.24 percent to be the proper cost of long-term debt in this proceeding.

Preferred Stock

41. Concerning preferred stock, Mr. Woy testified, "The principal difference (between his and Dr. Smith's proposal) arises from the allocation between electric and gas by the different capital allocation methods." (MPC Exh. 2, p. FVW-7)

42. In accordance with Finding of Fact No. 18, the Commission finds MPC's proposed cost of preferred stock of 8.52 percent to be appropriate for this proceeding.

Cost of Common Equity

Applicant

43. In making his return recommendation of 17.5 percent for common equity, Mr. Woy considered the testimony of Company witnesses Dr. Charles Olson and Mr. Eugene Meyer. Mr. Woy believes that a 17.5 percent cost for common equity "should enable the Company to protect its existing capital and attract additional capital at a reasonably competitive cost." (MPC Exh. 1, p. FVW-7)

44. In his testimony, Mr. Meyer examined the earnings requirements needed for MPC's utility operations to provide sufficient return to investors so that MPC can "attract capital in the amount needed so that the service requirements and growth requirements can be met at a reasonable cost" (MPC Exh. 1, p. EWM-2). Concerning return on common equity, Mr. Meyer stated:

> In my opinion, a return on equity set at competitive levels in today's capital markets is essential if the Company is to obtain the capital necessary to finance its future needs. That return on equity should provide coverages to initially protect and strengthen the Company's A/A bond ratings, and eventually regain AA/Aa bond ratings and provide the total return to the common stock investor (dividend yield and earnings growth) that will attract new common equity capital at prices which net the Company no less than book value. (MPC Exh. 1, pp. EWM 31-32)

45. MPC witness Meyer thus calculated that a return on common equity of 17.2 percent would allow the Company to sell new common stock at or above book value during most market conditions. (MPC Exh. 1, p. EWM-29)

46. In his rebuttal testimony, Mr. Meyer disagreed with Dr. Smith's growth figures, saying that he felt that investors are expecting a higher growth rate for MPC's dividend than the range proposed by her. Meyer testified, "Dr. Smith's 2.2 percent to 2.7 percent estimate of investor dividend increase expectations is based on historic data only and thus does not allow for future

changes in the rate of return on equity actually earned by the Montana Power Company." (MPC Exh. 1, pp. EWM-3-4)

47. Dr. Charles Olson relied primarily on a discounted cash flow (DCF) analysis of MPC in estimating the cost of common equity. Concerning the dividend yield portion of his DCF analysis of MPC, the following excerpt describes Dr. Olson's conclusion:

> I believe that the best dividend yield to utilize for purposes of a current DCF analysis is one based on the indicated (current) dividend rate of $2.48 and a simple average of the high and low prices since April 1, 1982.... Using this average price and the current dividend of $2.48, the indicated yield is 11.0 percent. (MPC Exh. 1, p. CEO-18)

48. Concerning expectations of MPC's growth in dividends, Olson used past and current data for the Company and the economy. To analyze investor growth expectations for MPC, he evaluated earnings, dividends and book value data. Dr. Olson concluded that the proper growth rate is between 5.5 and 6.0 percent. The result of combining an estimated dividend yield of 11.0 percent with the aforementioned growth figures is an investor requirement of between 16.5 and 17.0 percent. (MPC Exh. 1, pp. CEO-18, 22-23)

49. Dr. Olson checked the reasonableness of the 16.5 to 17.0 percent investor requirement for MPC, which resulted from his DCF analysis. The first check he used was the interest premium approach. This method is based upon the assumption that common stocks are more risky than bonds, and so, therefore, the stock must carry a premium over the bond yield (MPC Exh. 1, pp. CEO 23-24) Dr. Olson pointed to data that shows that "common stocks have produced returns that average 5 percentage points more than corporate bonds have. This implies an equity requirement of more than 20 percent for MPC because its bonds yield more than 16 percent currently" (MPC Exh. 1, p. CEO-24). Dr. Olson concludes, "In my view the interest premium approach indicates that the cost of common equity capital to MPC is more than 20 percent." (MPC Exh. 1, p. CEO-25)

50. Olson's second check on the cost of common equity to MPC was a DCF study of 27 electric companies. He chose companies with 1981 revenues between $100 million and $800 million and further limited the group to those companies with more than 90 percent of their revenues from electric operations. The average dividend yield of the 27 companies was 12.34 percent, and the

estimated investor expectation of growth was a rate of 4.0 to 4.5 percent. When the growth rates are combined with the dividend yield, the result of this DCF analysis is an investor requirement of 16.34 to 16.84 percent. (MPC Exh. 1, pp. 25-28)

51. Dr. Olson's third check "is an estimate of the cost of common equity to the 4 companies shown on Schedule No. 8 that generate at least 20 percent of their electricity from hydroelectric plants and whose 1981 operating revenues were between $150 and $600 million" (MPC Exh. 1, p. CEO-28). The average yield of the four companies was 13.44 percent and the expected long-term growth rate was 3.25 to 3.75 percent. Combined, the result is an investor requirement from 16.69 to 17.19 percent. (MPC Exh. 1, pp. CEO 29-30)

52. In addition, Dr. Olson reasoned that the 16.5 to 17.0 percent range, based on MPC's DCF analysis, must be increased to allow for financing costs and market breaks in order to avoid dilution on a given issue (MPC Exh. 1, p. CEO-30). He reasoned:

> In the case of MPC, the financing cost adjustment should be 5 percent because this is the discount MPC offers its shareholders to reinvest their dividends. This adjustment, by itself, would produce an equity return requirement of 17.4 to 17.9 percent (16.5 to 17.0 percent divided by .95). (MPC Exh. 1, p. CEO-31)

53. Finally, Olson includes a 10 percent premium to increase the probability of MPC issuing new common shares at a price above book value. The resulting cost of equity capital is between 18.2 and 18.7 percent. (MPC Exh. 1, p. CEO-32)

54. Dr. Olson concludes that the return on equity should be set between 18.0 and 19.0 percent, including no implicit allowance for attrition. His specific recommendation is to set the return on common equity at 10.5 percent, the midpoint of his range. (MPC Exh. 1, pp. CEO-32-33)

55. In his rebuttal testimony, Dr. Olson commented on Dr. Smith's DCF analysis. He concurred with her procedure for calculating the dividend yield (MPC Exh. 2, p. CEO-4), but disagreed with her growth rate of 2.2 to 2.7 percent. He felt that her growth figures were unrealistic and he commented:

> ...Suppose investors expect the Company to earn the return authorized the most recent rate case. At a 14.5 percent return and a 33 percent

> payout ratio, growth would be 4.8 percent, double Dr. Smith's estimate. (MPC Exh. 2, p. CEO-11)

MCC

56. MCC witness, Dr. Caroline Smith, used a discounted cash flow (DCF) model to determine a return on common equity recommendation. The DCF analysis yielded a range of return on equity of 13.0 to 13.5 percent. Dr. Smith recommended that the Commission allow a 13.4 percent common equity return. (MCC Exh. 2, p. 5)

57. Concerning the dividend yield portion of the DCF model, Dr. Smith calculated dividend yields for 95 electric and combination electric and gas utilities traded on the New York Stock Exchange on an average price basis for the six months from April through September, 1982. The average dividend yield for the 95 companies is 11.7 percent. (MCC Exh. 2, Appendix B, p. 3)

58. Expected dividend growth was calculated by examining growth rates in dividends, earnings, and book value over a ten year period for the companies in the study. The weighted average of all growth rates utilized in the study of these companies was 3.3 percent during that time period. (MCC Exh. 2, Appendix B, pp. 4-5)

59. Dr. Smith examined the reasonableness of her DCF approach by performing a comparable earnings study. A tabulation of earned rates of return for 95 electric and combination utility companies indicated that average earnings on common equity for the 1971-1980 period were in the 11 percent to 12-plus percent range. (MCC Exh. 2, p. 52)

60. In explaining her recommendation of 13.0 to 13.5 percent return on common equity, Dr. Smith summarized:

> The Company's dividend yield is 10.81 percent, based upon market prices over the six-month period ended September 30, 1982, and the indicated dividend rate at the end of September.... My estimate of the long-term dividend growth investors anticipate for MPC is in the range of 2.2 to 2.7 percent...and reflects a continuation of MPC's tendency to outperform the industry, but not to same degree that was true in the past. (MCC Exh. 2, pp. 25, 31)

61. Both MPC and MCC used a DCF model to determine the cost of equity in this proceeding. In each model there are elements which are based upon the judgment of the particular

witness. Dr. Olson performed a DCF analysis of MPC; whereas Dr. Smith evaluated many companies in her model. This Commission has consistently preferred the process of evaluating many companies in the DCF model so that factors which are unique and unusual to a particular firm can be eliminated or disregarded as being atypical utility conditions. Olson's study includes some projections and hypothetical data, especially in his retention ratio approach portion of his analysis. The Commission historically has downplayed the significance of subjective projections, since they are difficult to test, and hypothetical data, which by their nature are speculative. Overall, the Commission, therefore, finds the MCC approach to DCF analysis preferable to that of the Company in this proceeding.

62. Concerning the dividend yield portion of the DCF formula, Drs. Smith and Olson agreed on the methodology used to determine MPC's yield. Dr. Smith determined MPC's yield to be 10.81 percent, and Dr. Olson determined MPC's yield to be 11.0 percent. The difference in the two figures resulted from different time periods used by the witnesses in their analysis. Dr. Olson used four months of data in his analysis (April through July of 1982), and Dr. Smith used six months of data in her analysis (April through September of 1982). Both Smith and Olson used April as the starting point in their dividend yield analysis, but Dr. Smith included two more months of data than Dr. Olson. In this particular case, the Commission prefers the use of six months of data over the use of four months of data in determining dividend yield because the average resulting from the longer time period allowed for less chance of unusual conditions unfairly affecting the overall average. The use of more than six months of data may have resulted in a yield figure which overly stressed historical data. The Commission, therefore, favors the use of Dr. Smith's yield figure of 10.81 percent in the DCF formula as it represents a more desired time period of data than that proposed by Dr. Olson.

63. The Commission feels there are some factors which indicate that Dr. Smith's growth range of 2.2 to 2.7 percent is somewhat low: (1) MPC's own weighted average growth over ten time periods is shown to be 4.62 percent on Table B-7 in Dr. Smith's Appendix B of her testimony; (2) the weighted average growth over ten time periods for Dr. Smith's 95 companies was 3.33 percent (MCC Exh. 2, Appendix B, Table B-7); and (3) the unweighted average growth of earnings per

share, dividends per share, and book value per share over ten time periods, as shown on Dr. Olson's Schedules 3, 4 and 7 of 22 is 3.4 percent ([2.4 + 2.9 + 4.9] ÷ 3 = 3.4). The Commission feels, in this particular case, that Dr. Smith's industry average weighted growth of 3.33 percent represents a fair estimation of MPC's growth. This figure is somewhat higher than that proposed by Dr. Smith and considerably lower than Dr. Olson's. The unweighted average of Dr. Olson's ten period growth figures, 3.4 percent as explained above, provides a test of reasonableness for this growth figure. The Commission finds merit in using 3.33 percent as the growth figure to be applied in the DCF formula because it represents a current historical industry average of which MPC is a part and reflects current investor expectations of utility industry stock.

64. When the Commission favored dividend yield figure of 10.81 percent and growth figure of 3.33 percent are combined, the result is 14.14 percent cost of common equity. The Commission, therefore, having considered the various factors concerning this issue, determines that the acceptable rate of return on common equity is 14.14 percent for this proceeding. This figure is above the upper end of the range recommended by Dr. Smith (13.5%), and below the lower end of the range recommended by Dr. Olson (18.0%).

Rate of Return

65. Based on the findings for long-term debt, preferred stock, and common equity in this proceeding, the following capital structure and costs resulting in an 11.63 percent overall rate of return are determined appropriate:

Description	Amount (000)	Ratio	Cost	Weighted Cost
Long-Term Debt	$400,796	49.97%	10.24%	5.12%
Preferred Stock	81,031	10.10	8.52	.86
Common Equity	320,277	39.93	14.14	5.65
Total	$802,104	100.00%		11.63%

PART C

RATE BASE

66. Consistent with previous Commission decisions, both MPC and MCC proposed a 1981 average rate base, adjusted to include certain known and measurable 1982 changes. One of the primary considerations of the Commission in rate base decisions has always been proper matching of test year income with the plant that produced that income. The Commission, therefore, finds a 1981 average rate base, adjusted for certain known and measurable 1982 changes, to be appropriate in this proceeding.

Net Plant in Service

67. MPC proposed an average net plant in service adjusted to reflect the following: (1) settlement in 1981 of the Montana Public Service Commission/Federal Energy Regulatory Commission (FERC) plant difference; (2) the current allocation applicable to Common Utility Plant and Depreciation Reserve; (3) the retirement of computer software; and (4) distribution poles at 25 percent negative net salvage (MPC Exh. 1, pp. WBS-4-6). MCC made no adjustments to the Company's proposed average net plant in service. Since the Company's proposed figures comply with the accepted methodology of average year rate base, the Commission determines the proper amount of net plant in service to be $501,443,000.

Elimination of Excess Costs

68. Consistent with previous Commission orders, the Company proposed to exclude from rate base the recorded FERC fair value amount in the Mystic Lake Hydroelectric Project which is in excess of original cost (MPC Exh. 1, p. WBS-8). MCC proposed no adjustments to MPC's figures for this particular rate base item. Since the Company's proposed figures comply with the accepted methodology in previous Commission decisions, the Commission determines the proper amount of eliminated costs recorded on books in excess of original cost for the Mystic Lake Hydroelectric Project to be $1,737,000 as a rate base reduction.

Customer Contributed Capital

69. In their filing the Company adjusted customer contributed capital for accumulated deferred income taxes applicable to (1) amortization of the Commission/FERC plant difference and (2) accelerated depreciation (MPC Exh. 1, p. WBS-7). MCC witness Hess proposed an adjustment to reflect the effect on all related items of new allocation of common plant which was approved by the Commission in MPC Docket No. 81.6.57. Mr. Hess testified, "The adjustment was not properly applied to all related items and I asked for the data to consistently apply the new allocation" (MCC Exh. 1, p. 13). Based on the Company's response to MCC Data Request-23, Hess proposed a further rate base reduction of $106,000. During the hearing, MPC provided an adjusted Exhibit WBS-3, which accepted MCC's proposed adjustment. The Commission determines, therefore, that the MCC adjustment of $106,000 is proper and that the accepted amount of customer contributed capital as a rate base reduction is $44,728,000.

Working Capital

70. In their filing the Company adjusted working capital to bring the gross cash requirements and credit for accrued taxes to the end of the test period level. MPC adjusted materials and supplies to reflect the current allocation of miscellaneous supplies due to the allocation percentage change. The Company also removed the balances associated with the 1972 Kerr Rental Settlement (MPC Exh. 1, p. WBS-7). As a result of revised figures provided by the Company, MCC witness Hess proposed an adjustment to working capital during the hearing. Mr. Hess testified:

> These adjustments also will change rate base slightly because of the formula for calculating working capital. The decrease in operating expenses decreases the one-eighth allowance for working capital, and the decrease in property taxes decreases the 60 percent offset in that formula. The total adjustment to rate base would be to increase it by $322,000. (TR, p. 395)

71. Because of various adjustments made by the Commission in O&M Expenses, the working capital portion must be adjusted accordingly. The Commission accepts the MCC adjustments with the resulting approved amount of working capital as a component of rate base being $13,779,000.

Unamortized Gain

72. As discussed in Finding of Fact paragraph 31, Dr. Smith testified that the unamortized gain on reacquired debt could be treated as a rate base reduction, similar to the treatment of deferred taxes (MCC Exh. 2, p. 66). In past cases, the Commission has treated deferred taxes as a rate base reduction rather than allowing them into capital structure as a zero-cost item. After careful consideration, the Commission finds that the unamortized gain is similar to deferred taxes for ratemaking purposes. The Commission determines, therefore, that the unamortized gain on reacquired debt should be treated as a deduction from rate base in the amount of $195,000.

Total Rate Base

73. The following rate base proposals were submitted. The final column is the rate base approved by the Commission in the amount of $468,562,000.

MONTANA POWER COMPANY

Average Rate Base
(000)

	Proposed by MPC	MCC Adjustments	Commission Adjustments	Approved Average Rate Base
Total Plant in Service	$634,529	$	$	$634,529
Total Accumulated Depreciation	(133,086)			(133,086)
Total Net Plant	$501,443			$501,443
Elimination of Excess Costs	(1,737)			(1,737)
Less: Customer Contributed Capital	(44,622)	(106)		(44,728)
Plus: Working Capital	13,658	322	(201)	13,779
Less: Unamortized Gain	0	0	(195)	(195)
Total Electric Rate Base	$468,742	$ 216	$ (396)	$468,562

PART D

REVENUES, EXPENSES, AND REVENUE REQUIREMENT

74. Mr. William Slaughter of MPC sponsored exhibits and testimony which detailed the cost of service and average rate base amounts which support the revenue increase request of

$47,584,676, as revised during the hearing. This revised revenue request included proposed intervenor adjustments which MPC accepted. During cross-examination by Mr. Lopach, Mr. Slaughter responded:

> Q. Mr. Slaughter, in response to a request from the staff, I believe, for a revised cost-of-service exhibit reflecting revisions to the Company's case and adjustments as accepted, have you prepared a document which reflects those changes?
>
> A. Yes, I have, Mr. Lopach. ...It's an updating of the revenue requirement of the Company at this point in the proceeding that was compiled at the request of the Commission during the cross-examination of Mr. Burke. (TR, Vol Il, p. 658)

This revised revenue request was based on an overall rate of return of 12.83 percent. Mr. Slaughter indicated that the Company utilized a 1981 historical test period as a basis for its filing and made various 1982 adjustments. Mr. Slaughter concluded that, based on the test period ending December 31, 1981, the Company would require additional revenues of $47,584,676 in order to earn an overall return of 12.83 percent. This revised revenue figure was calculated by MPC witness Jerrold Pederson on Revised Exhibit JPP-1.

75. Mr. George Hess, witness for MCC, presented testimony and exhibits on the cost of service and the proper rate base. Mr. Hess urged the use of an average 1981 rate base, as was also proposed by the Company, adjusted for certain known and measurable 1982 changes. He prepared a series of schedules and presented related testimony which culminates with the change in revenues required to produce the 11.12 percent rate of return recommended by Dr. Caroline Smith. Mr. Hess concluded that, based on the 1981 average test year and the revised exhibits provided by Mr. Slaughter during the hearing, the Company requires additional permanent revenues of $22,297,000. In his revised exhibits, Mr. Hess recommended a revenue decrease of $10,704,000 from the interim revenue level of $33,001,000. This reduction results in his recommendation of a $22,297,000 revenue increase (33,001,000 - 10,704,000 = 22,297,000).

76. Mr. Anthony Yankel, expert witness for Montana Irrigators, Incorporated (MII), presented testimony concerning MPC's revenue requirement. Mr. Yankel proposed two adjustments dealing with: (1) the manner in which the Company calculated its energy losses and how this relates

to the purchase power the Company obtains from other resources; and (2) the establishment of an adjusted price for surplus energy sales to other utilities. His first recommendation resulted in a proposed net increase in surplus sales revenue of $2,585,032 (MII Exh. 1, p. 21). His second recommendation resulted in a proposed increase in surplus sales revenue of $4,667,903 (MII Exh. 1, p. 22).

77. Dr. E. Odgers Olsen, Jr., expert witness for CICO, presented testimony proposing an adjustment to the fuel and purchased power cost filed by the Company. Dr. Olsen testified:

> A reasonable test of the pro forma adjustments for power expense and credits made by MPC is to compare the results of the adjustments to the actual 1982 values. I have performed such an analysis. The results are that the test year values overstate fuel and purchased power costs, understate out-of-state sales and overstate the unit price that MPC will receive for energy sales to out-of-state customers. The net result of these differences is that the revenue requirement is overstated by approximately $4 million. (CICO Exh. 6, p. 8)

Operating Revenues

Industrial Revenues

78. At the time of the Discovery Audit in Butte, a number of questions were raised concerning the estimation of industrial revenues for the 1981 test year. The Company, in response to Data Request DBG-19 requested by J.W. Wilson & Associates, said that industrial revenues had been understated by $10,000. Mr. Hess included this adjustment in his testimony, and the Company accepted that adjustment in their revised exhibits provided during the hearing. Since this is not a contested item, the Commission finds the proposed increase of $10,000 for industrial revenues to be appropriate in this proceeding.

REC Revenue

79. In their Interim filing, the Company included a nonjurisdictional revenue adjustment to reflect a similar adjustment approved by the Commission in Docket No. 80.4.2. In making such an adjustment the Commission raised nonjurisdictional revenues by the amount necessary to provide the same rate of return authorized for jurisdictional sales.

80. Mr. Hess of MCC proposed to adjust further the nonjurisdictional revenues "to avoid burdening jurisdictional customers with a revenue deficiency associated with nonjurisdictional service" (MCC Exh. 1, p. 4). Hess made a further adjustment based on the Company's response to Data Request MCC-2 which said that income taxes included in the nonjurisdictional cost of service were understated. Mr. Hess corrected the income tax calculation and also adjusted the nonjurisdictional cost of service to reflect the rate of return recommended by Dr. Smith, including a revenue credit based on his estimate of out-of-state sales. (MCC Exh. 1, pp. 4-5)

81. MPC's filing includes plant revenues and expenses associated with REA service. As a result, the Commission finds that the return associated with the plant providing REA service should be at the same level as MPC's jurisdictional return. The Commission, therefore, determines the methodology proposed by Mr. Hess concerning nonjurisdictional revenues to be proper in this proceeding. After adjusting for the approved rate of return and level of out-of-state sales, the proper amount of increase to REC revenues is $2,284,000, which includes the Company's adjustment provided in their interim filing and the further adjustments of Mr. Hess.

Furthermore, the Commission believes the Company should file with FERC on a more regular basis concerning the REA tariff and submit a long-run incremental cost study (LRIC) with the FERC filing in a manner consistent with the jurisdictional rate design determinations of the Montana Public Service Commission. Such filing will demonstrate that the REA would be treated in a manner entirely consistent with all other classes.

Interest Income

82. George Hess proposed an adjustment to recognize the income from invested unexpended proceeds of certain pollution control bonds. Mr. Hess stated, "... [D]uring the period June 1981 through September 1982 a substantial amount of the proceeds were unexpended and invested in securities which yielded more than $17 million of income" (MCC Exh. 1, p. 5). His adjustment is in the amount of $1,782,000 as an increase to revenues and amortizes the income in excess of the cost of the unexpended proceeds over a period of three years. (MCC Exh. 1, p. 5) Concerning his reasoning for making the adjustment, Mr. Hess testified:

> I agree that when a utility makes a profit on unexpended bond proceeds, the profit should flow through to rate payers. Since Dr. Smith has not reflected these profits in her rate of return calculation I have adjusted utility operating income to reflect those profits amortized over a three year period. (MCC Exh. 1, p. 6)

83. Mr. Woy of MPC believed it would be improper to attribute any of this income to the revenue requirements in this proceeding. Woy stressed that the Company does not have access to this interest income as the funds are under the control of a trustee. He continued;

> [T]he earnings on the temporary investment of these funds provides the financing of a like amount of the qualified pollution control facilities. The important point here is that these investment earnings are not available to the Company for any purpose other than funding specific qualified pollution control facilities. (MPC Exh. 2, p. FVW-13)

84. The Commission finds that the reasoning used by MPC in opposing the adjustment of Mr. Hess ignores the fact that MPC did earn income from unexpended proceeds of bonds and that its books reflect these proceeds as income. The cost of this income is borne by ratepayers. Since ratepayers are bearing the costs of these pollution control bonds, the benefits resulting from investment of unexpended proceeds should flow through to ratepayers over the period that the income exists. Under Mr. Hess' proposal, present ratepayers realize a portion of those benefits, and future ratepayers will also realize related benefits. The Commission, therefore, finds the interest income adjustment proposed by Mr. Hess in the amount of $1,782,000 to be proper in this proceeding. In doing so, the Commission takes notice that Mr. Hess recommended that in future rate cases, when additional net interest income becomes known, those amounts should also be amortized.

Normalization

85. CICO witness Olsen recommended using actual 1982 data in the areas of fuel and purchased power costs and out-of-state sales. In doing so, he effectively proposed that the Commission disregard normalization for ratemaking purposes in this Docket. Olsen testified:

> A reasonable test of the pro forma adjustments for power expense and credits made by MPC is to compare the results of the adjustments to the actual 1982 values. (CICO Exh. 6, p. 8)

The net result of the analysis performed by Dr. Olsen showed that MPC's revenue requirement was overstated by $4,072,614. (CICO Exh. 6, p. 9)

86. MPC witness Gregg disputed Dr. Olsen's statements concerning the use of actual 1982 data rather than numbers resulting from the normalization process. Gregg observed that comparing normalized data to actual data would only be valid if actual 1982 were a normal year since the "whole purpose of using a 'test period' rather than actual is an attempt to arrive at 'normal' expenses and revenues" (MPC Exh. 2, p. DBG-25).

87. The Commission believes that normalization is a proper regulatory method in smoothing out the high and low fluctuations of the economy, weather, and water. Normalization results in rate stabilization and counteracts extreme conditions which could otherwise greatly distort a test year in a rate case. Consistent with previous Commission decisions, the Commission, therefore, finds the normalization approach proposed by the Company and endorsed by Mr. Hess of MCC to be proper in this proceeding.

Out-of-State Sales

Volumes

88. MCC witness Hess adjusted out-of-state sales volumes to reflect his use of a higher amount of opportunity purchases than proposed by the Company and to reflect changes under the new BPA contract. As will be discussed in a later finding, the Commission agrees with the level of opportunity purchases proposed by Mr. Hess in this proceeding. The Commission also finds the reflection of the modifications to the new BPA contract to be proper as they are known and measurable. Therefore, the Commission finds the volume of off-system sales proposed by Mr. Hess to be proper in this proceeding.

Price

89. MPC witness Gregg proposed a two-tier pricing system for out-of-state sales incorporating both critical water conditions (and the resulting high sales prices) and median water conditions (and the resulting average sales prices). The average revenue from off-system sales

proposed in this case for the test period was approximately 26.5 mills per kwh. In comparison, the average from actual 1982 sales was about 20.3 mills per kwh. (MPC Exh. 2, p. DBG-7) MCC witness Hess proposed no adjustment to the Company's pricing methodology.

90. MII witness Yankel disagreed with MPC's pricing system as he felt it was too low based on the fact that during the test year of 1981 the Company was able to receive over 40 mills per kwh for surplus energy, while experiencing above critical water conditions (MII Exh. 1, p. 16). Mr. Yankel proposed a price of 32.62 mills per kwh "for median hydro that is equal to the maximum FERC rate for 100 percent of the fixed cost recovery of the Colstrip plants in all but the months of May and June when the price would drop to only recovering 50 percent of the fixed costs" (MII Exh. 1, p. 20). Under Yankel's pricing methodology, revenue from out-of-state sales would be increased by $4,667,903 (MII, Exh, 1, p. 22).

91. In order for MPC to be able to sell surplus energy at a price higher than 32.62 mills per kwh, the cost of the Bird plant must be rolled into the average price. MPC, however, did not include any fuel expense from the Bird plant. In view of the actual price received in 1982 and the exclusion of Bird fuel expense in this proceeding, the Commission rejects the pricing system proposed by Mr. Yankel and adopts the pricing methodology for off-system sales proposed by the Company.

92. In this proceeding, the Commission chose not to make any adjustments for excess capacity; however, it is clear that if this Commission allows surplus generating capability into rate base, and if that surplus is being sold at a loss, the ratepayers are paying the difference between cost of generation and revenue from off-system sales. Since our region is looking at the probability of a long-term surplus, this Commission believes strongly that a concerted cooperative effort will be necessary to recover some of the fixed costs associated with new thermal plants. In future cases, if cooperative efforts do not provide a remedy, this Commission may consider various actions to remedy the situation. For instance, the Commission may consider disallowing excess generating capability in the rate base, thus allowing the stockholders of MPC to experience the cost of subsidizing off-system sales losses. Another possible approach would be to allow the excess in the rate base and impute revenues to off-system sales equal to MPC's long-run incremental cost or the

full revenue requirement of existing thermal facilities. Such alternatives were seriously considered in this Docket, but the Commission decided rather to give the Applicant fair warning and offer the opportunity for open discussion of this serious problem which affects both ratepayers and stockholders. A rational regional pricing strategy is critical from both the investor and ratepayer perspectives.

93. In accepting MPC's pricing system, the Commission insists upon a condition to which the Company is expected to adhere. A large part of the reason that the Commission accepted the MPC sales price was in recognition of the low market prices now being realized. Another important consideration was the fact that MPC has been unable to negotiate any firm contracts for off-system sales. The Commission, therefore, determines that if there is a noticeable increase in the market price for off-system sales, or if MPC successfully negotiates any firm contracts for off-system sales, the Company should file with the Commission an application reflecting those improved market conditions or negotiated contracts.

System - Losses and Purchased Power

94. MII witness Yankel criticized the MPC loss study which showed that: "the infusion of purchase power tends to reduce the overall system losses" (Direct p. 9). Yankel points out that this is not reflected in MPC's load/resource study. Yankel further testified:

> The fact that this reduction is not included in the load/resource study means that the system losses are overstated, and thus, the available power to be sold as surplus power is understated. (Direct p. 9)

95. Yankel applied a loss factor of 6.824 percent to the amounts of purchased power shown on MPC Exhibit DBG-4 to arrive at additional surplus sales. In his calculation Yankel priced his additional surplus at 32.62 mills in all months except May and June where he used 21.95 mills. Yankel's adjustment produced a net increase in surplus sales revenue of $2,585,032.

96. MPC witness Gregg in his original testimony and exhibits calculated system losses using a two step process. He separated the net interchange into two parts; off-system sales and all other interchange. In his rebuttal testimony Gregg agreed that the best way to develop losses is to adjust the net interchange. (Rebuttal p. 12)

97. Gregg disagreed with Yankel on a basic assumption:

> ... that one can apply loss factors independently to the purchases and the sales and that all purchases can be considered to decrease losses or that all off-system sales can be considered to increase losses. (Rebuttal pp. 13, 14)

Rather Gregg noted:

> What actually happens is that the purchases and sales displace one another and their net may increase or decrease losses. (Rebuttal p. 14)

98. Gregg derived additional surplus sales revenues of $1,401,634 using his revised calculation based on a net amount of purchases and sales. Hess calculated losses in the same manner as Gregg did in his rebuttal testimony. Hess derived surplus sales revenues of $1,536,000. He got a higher amount due to his level of opportunity purchases.

99. The Commission accepts the $1,536,000 calculated by Hess based upon the evidence on the record which showed that losses are properly based on the net amount of purchases and sales. The Applicant is urged to refine the study of system losses in future rate cases.

Revenue

100. Based on the sales volumes of Mr. Hess, the sales price of the Company, and the adjusted losses of Mr. Hess, the Commission finds the MCC out-of-state sales adjustment by Mr. Hess in the amount of $4,465,000 as a revenue increase to be proper in this proceeding.

101. As a result of the above adjustments to operating revenues, the Commission determines $189,524,000 to be the proper amount of pro forma operating revenues.

Expenses

Purchased Power

102. Mr. Hess made two adjustments to purchased power expense: (1) increased the level of opportunity purchases for ten months of the year from 20 megawatts (MW) to 50 MW, and (2) decreased the purchase price from 20 mills per kwh to 17 mills per kwh (MCC Exh. 1, p. 10). During the hearing, Mr. Hess also provided an exhibit which, among other things, reflected the new BPA

contract, which resulted in a reduction of purchased power expense (TR, Vol. III, pp. 392-393).

103. Concerning the increase in opportunity purchases to 50 MW for all months except May and June, Hess felt that the Company's proposal of approximately 22 MW per month was too low in comparison with recent experience. He noted that in 1980 MPC's opportunity purchases amounted to 85 average megawatts; in 1981, opportunity purchases were 100 average megawatts; and for the first 11 months of 1982, opportunity purchases were 138 average megawatts (MCC Exh. 1, pp. 7-8).

104. Concerning the average price paid for opportunity purchases, Mr. Hess felt that MPC's proposal of 20 mills per kwh was unreasonably high and could actually result in the Company reselling the purchased power at a loss (MCC Exh. 1, p. 9). Hess stated:

> The average rate paid for opportunity purchases was 16.1 mills per Kwh in 1980, 16.6 mills in 1981 and 11.6 mills in the first 11 months of 1982. Of course, the 1982 price is down because of the extremely good hydro conditions that year. I used an average rate of 17 mills per Kwh which is a little more than the 1980 and 81 average rates. (MCC Exh. 1, pp. 9-10)

105. Mr. Gregg of MPC testified against the opportunity purchases adjustments proposed by Mr. Hess. Concerning the proposed purchase price of 17 mills, Mr. Gregg found some error in Mr. Hess' calculations. Gregg stated:

> He then applies his 17 mill figure to the ten normal months (excepting May and June). However, he did not examine the experienced average price paid in the ten chosen months to which he applied his 17 mills. That actual experience was 17.4 mills in 1980 and 18.3 mills in 1981. Thus, he makes an inconsistent comparison and chooses a price less than what we actually paid in 1980 and 1981. Further, he does not reckon with the fact that BPA's secondary rate which tends to set the floor for non-firm energy sales in the Northwest, has now risen from the range of 4 1/2 - 10 mills in 1980, 1981 and the first nine months of 1982 to a range of 9-18 mills under current rates. (MPC Exh. 2, p. DBG-4)

106. Mr. Gregg also did not agree with the MCC proposal of increasing the volume of opportunity purchases for ten months of the year to 50 MW per month. Gregg said that if he could

agree with Hess' 17 mill sales price, he might be able to agree with the proposed increase in volume of purchases. Gregg testified:

> Certainly with the lower average price he [Hess] suggests, we would enlarge our opportunities to strike beneficial sales transactions within the fixed upper constraint of full cost coverage under our FERC tariff. ...But since I do not agree with his price, I cannot agree to his amount (of opportunity purchases) based on the rationale just stated. (MPC Exh. 2, p. DBG-5)

107. Regarding the purchase price of opportunity purchases, page DBG-4 of MPC Exh 2, stated that actual experience for ten months (excluding May and June) was 17.4 mills in 1980 and 18.3 mills in 1981, the average of which is 17.85 mills per kwh. On that same page, Mr. Gregg noted that BPA's secondary rate "which tends to set the floor for non-firm energy sales in the Northwest," has now risen to a range of 9-18 mills under the current rates. Based on the above average and the upper end of the range of the new BPA secondary rate, the Commission determines that 18 mills per kwh is the proper price for opportunity purchases in this proceeding.

108. As Mr. Gregg stated on page DBG-5 of his rebuttal testimony, "Certainly with the lower average price he [Hess] suggests, we would enlarge our opportunities to strike beneficial sales transactions within the fixed upper constraint of full cost coverage under our FERC tariff" (MPC Exh. 2, p. DBG-5). Since the Commission found proper the use of 18 mills per kwh as the price for opportunity purchases, an increase in the volume of these nonfirm purchases would be justified based solely on Mr. Gregg's reasoning. As Mr. Hess pointed out, MPC averaged opportunity purchases of 85 MW in 1980, 100 MW in 1981, and 138 MW in the first 11 months of 1982 (MCC Exh. 1, pp. 7-8). The Commission finds that Mr. Hess' adjustment of increasing opportunity purchases to 50 MW for 10 months of the test year (excluding May and June) is proper in this proceeding, based on Mr. Gregg's analysis and the actual figures for 1980, 1981 and 1982 as stated above. The resulting adjustment to purchased power expense, including the Company's Interim adjustment, is an increase in the amount of $2,907,000.

Captive Coal

109. As in a number of recent electric rate increase requests involving all major electric utilities subject to the Commission's jurisdiction, MCC has contested the reasonableness of coal expenses claimed by MPC. In this case, the issue centers around whether payments made by MPC to its wholly owned subsidiary, Western Energy, for coal supplies should be allowed in their entirety. Western Energy supplies all coal requirements for MPC's Corette and Colstrip plants.

110. In his prefiled direct testimony MPC witness J. J. Burke testified that the coal expense claimed was reasonable and should be allowed. (Exh. 1, JJB-7 through 9) In support of this claim, Mr. Burke noted that coal supplies for MPC's generating stations had been acquired at "extremely low cost when viewed against industry standards"; that negotiations for the Colstrip 1 and 2 plants were led by MPC's partner Puget Sound Power and Light Company, who had worked hard to "ensure that costs of generation would be held to the lowest possible level"; that the independent bidding process conducted by the Arthur D. Little organization constituted "the most responsible methodology determinable to ensure that its (MPC's) fuel expense would not only be at the lowest level achievable but also could be demonstrated objectively to be so." Mr. Burke also stated that the Company's concern over the Commission's previous disallowance of a portion of claimed fuel expenses is heightened by its "observations regarding regulatory practices in recognizing the actual level of fuel expense of the other electric utilities operating in Montana."

111. MCC witness Dr. J. W. Wilson challenged the reasonableness of the profits earned by Western Energy, and recommended a downward adjustment in allowed expenses to reflect a 16 percent return on investment. According to Dr. Wilson's calculations, Western Energy earned a 20.57 percent total return (equity return plus interest) and a 25.62 percent return on equity in 1981 (MCC Exh. 3, J.W.-2, p. 1 of 2). Dr. Wilson based his recommendation on a comparison of Western Energy's returns with those of six other coal companies. The returns of the six companies in 1981 were far below Western Energy's. (MCC Exh. 3, J.W.-5, p. 1 of 1)

112. Dr. Wilson further compared Western Energy's returns with rate of return projections made by Value Line for the six companies. (MCC Exh. 3, p. 13; J.W.-6) Projections for return on total capital averaged 11.5 percent and return on net worth averaged 15.8 percent.[1]

113. Based on this information and a limited DCF analysis, Dr. Wilson concluded that "the market cost of equity capital in the coal industry is not in excess of 15 percent." (MCC Exh. 3, p. 15)

114. Finally, Dr. Wilson compared Western Energy's returns with all industrial sectors of the economy. (MCC Exh. 3, pp. 15, 16) That analysis revealed that, in the first two quarters of 1982, all manufacturing corporations had profits of 10 to 10.5 percent, and that only one part of the industrial sector (tobacco) had returns in excess of 15 percent during the first two quarters of 1982. (MCC Exh. 3, p. 15; J.W.-9)

115. Dr. Wilson noted that Western Energy is in fact less risky than other coal companies because of its relationship with MPC. (TR, Vol. IV, p. 815)

---

[1] Dr. Wilson noted that these were not strictly comparable to Western Energy because they were made for the consolidated companies and therefore included both coal-related activities and the companies' other activities.

116. MPC witnesses Burke and D. R. Gibbons presented rebuttal testimony on the captive coal issue. (MPC Exh. 2) Mr. Burke noted that there should be no doubt that the coal contracts for Colstrip Units 3 and 4 are reasonable, since they were settled through arbitration.[1] Mr. Burke also claimed that Mr. Gibbon's testimony "affords an independent and unbiased determination that the MPC coal price was independently negotiated and represents the best fuel cost attainable for Montana consumers." (MPC Exh. 2, p. 4)

117. Mr. Burke also criticized Dr. Wilson's use of an average 1980 and 1981 earnings bases in calculating Western Energy's returns. (MPC Exh. 2, p. JJB-5)

118. Mr. Burke sponsored exhibits showing Western Energy's price for coal to customers other than MPC, claiming that they demonstrated the charge to MPC "is well within the guidelines fixed by the marketplace for the supply of coal. (MPC Exh. 2, Exh. JJB-1)

119. As final support for his claim that Western Energy's coal prices are reasonable, Mr. Burke sponsored a letter from the Montana Department of Revenue. (MPC Exh. 2, Exh. JJB-2) That letter states that the Department concluded that Western Energy's contracts for the Corette plant and Colstrip units 1 and 2 were not negotiated at arm's length and that the price is below the market value. Mr. Burke noted that Western Energy has challenged this conclusion and will continue to do so.

120. Mr. Gibbons testified captive coal operations are generally beneficial to the utility operations. He also testified that in his opinion there is a competitive market and that Western Energy coal supply contracts compare favorably in that market. (MPC Exh. 2, p. DRG-7) Mr. Gibbons then compared the Western Energy contract with one he thought to be similar between Utah International, Inc. and Colorado-Ute Electric. He concluded that "as a Buyer, he would feel more comfortable with the Western Energy contract." (MPC Exh. 2, p. DRG-9) He also found them reasonable based on his experience with other coal contracts. (MPC Exh. 2, pp. 14, 15)

---

[1] Coal expenses for Colstrip units 3 and 4 are not at issue in this case.

121. Mr. Gibbons then reviewed the services performed by Arthur D. Little, Inc. on the coal contract for the Corette Plant. Mr. Gibbons testified that the Little analysis demonstrated that based on competitive bids, Western Energy's coal was the cheapest available. (MPC Exh. 2, pp. DRG-11 - DRG-14)

122. In addition to finding the coal contracts themselves competitive, Mr. Gibbons also found prices themselves reasonable and competitive. "...[T]hrough forethought and efficient operations, the Western Energy Company is able to supply coal at very competitive prices and still make a respectable profit." (MPC Exh. 2, p. DRG-16)

123. Mr. Gibbons criticized the selection of coal companies Dr. Wilson used to judge the reasonableness of Western Energy's returns, claiming that they "were selected more for their convenience than their representation of the more efficient coal companies in the United States." He also claimed that since most had only eastern operations, had underground mines and suffered a long strike in 1981, they are not a representative group to which Western Energy should be compared. (MPC Exh. 2, p. DRG-17)

124. As an alternative, Mr. Gibbons proposed a different set of coal companies that he believed were more comparable to Western Energy, since several have large western surface operations and are, in Mr. Gibbons' opinion more efficient than the group used by Dr. Wilson. (MPC Exh. 2, p. DRG-17)

125. Mr. Gibbons rejected Dr. Wilson's discussions of profits made by unregulated industries because the data used includes "good, bad and indifferent companies" and because the first half of 1982 was a recessionary period. (MPC Exh. 2, p. DRG-18)

126. Mr. Gibbons agreed with Dr. Wilson that a method based on profits on fair market value of a company's assets is circular. The only method he thought valid in determining fair market value was to look at a recent sale of coal assets. While noting that this approach "suffers from lack of complete comparability," based on such a sale, Mr. Gibbons concluded that there was an indication that the fair market value of Western Energy was approximately $840 million upon which it earned a return on equity value of less than 2 percent. (MPC Exh. 2, p. DRG-20)

127. As noted by Mr. Burke and as discussed at the hearing, this Commission has been faced with the captive coal issue on a number of occasions in rate cases involving the Pacific Power and Light Company (PP&L), Montana-Dakota Utilities Company (MDU), and MPC. In considering evidence on the issue in at least five rate cases, the Commission has become thoroughly familiar with the issue, and the various methodologies employed. The utilities in all of these cases has consistently argued for a marketplace approach which compares the price paid by the utility for its coal supplies with prices paid for noncaptive coal by other buyers. This has been called the traditional approach.

128. The Consumer Counsel has advocated two methods. In the case leading to Montana-Dakota Utilities Co. v. Bollinger, ____Mont.____ , 632 P.2d 1086 (1981) the Consumer Counsel advocated what has been called the California approach, which attributes the utility's rate of return to the coal subsidiary. It was this method which was disallowed by the Montana Supreme Court. In this case, use of the California approach is not an issue. The method advocated by the Consumer Counsel is considered a variation of the traditional approach, since it uses profit data from other coal companies, rather than the utility, in determining a fair rate of return for the coal subsidiary.

129. Transactions between affiliated companies have long been a matter of concern to public service commissions because of the potential for the utility evading effective regulation by capturing excessive profits from its nonutility subsidiary. This special concern has been noted and endorsed by the Montana Supreme Court:

> When one of the expenses submitted by MDU is caused by transactions with a subsidiary company, the scrutiny applied by the PSC must be all the more intense.
>
> 632 P.2d at 1089

130. In reviewing transactions between Montana's major utilities and their coal subsidiaries, the Commission believes that in order to assure ratepayers that they are not reimbursing the utility for excessive coal expenses, the Commission must find that neither prices charged by the subsidiary nor the profits enjoyed by the subsidiary are excessive, when compared to other comparable coal companies. Thus, when the Commission reviewed MDU's coal expenses following reversal by the Supreme Court, it found that when adjustments were made to comply with the Court's decision, the coal subsidiary's profits were very close to those originally found reasonable. (Docket

No. 81.1.2, Order No. 4799a) Similarly, in a recent case involving PP&L, the utility presented evidence that when the same kind of adjustments were made to the Consumer Counsel's calculations, the coal subsidiary was reaping a modest and reasonable 14.9 percent profit. (Docket No. 82.4.28, TR. p. 588) As noted by Dr. Wilson, there was no serious challenge in this docket to what Western Energy's profits actually were. By contrast, that was a major issue in the PP&L case (TR, p. 731). In both cases, the utility had already presented evidence that prices charged were comparable to those charged by other companies.

131. Much of MPC's testimony fails to address the approach of requiring both reasonable prices and reasonable profits. The only criticism leveled by MPC regarding Dr. Wilson's calculations of Western Energy's profit levels was Mr. Burke's claim that use of an average of 1980 and 1981 earnings bases was misleading. (MPC Exh. 2, p. JJB-5) However, MPC failed to discuss how this data was misleading or how Western Energy's profit figures were distorted. In fact, those figures were accepted by Mr. Gibbons. (TR, p. 218)

132. Mr. Gibbons claimed that Western Energy's profits were not excessive when compared to "efficient" coal operations. (MPC Exh. 2, DRG-16) When asked his definition of "efficient, " however, his conclusion was that companies which earned high profits were, by definition, "efficient." (TR, Vol. I, p. 234) The Commission cannot accept this kind of circular reasoning, which would lead it to conclude that Western Energy and other captive coal operations should receive from the utility's ratepayers fuel expenses that reflect the highest profits in the industry.

133. In using the comparable profits method for testing the reasonableness of a captive coal company's profits, the Commission is aware that, to the degree possible, truly comparable companies should be used. It has also been generally acknowledged, however, that perfect comparability is impossible. As previously noted, Mr. Gibbons challenged the comparability of companies used by Dr. Wilson. Similarly, on cross-examination, MCC created serious questions about the companies used in Mr. Gibbons analysis. In addition to creating serious questions about the method used for calculating returns of other coal companies (TR, Vol. I, pp. 302-324), MCC elicited from Dr. Gibbons that several of his "coal companies" in fact had a very small investment

in coal operations. For example, two companies used by Mr. Gibbons had coal operations which were less than 3 percent of their total operations (TR, pp. 315-316). Such a minimal investment, especially in view of the methods used to calculate returns, seriously compromises Mr. Gibbons' testimony regarding coal company profitability.

134. There are also problems with the comparability of companies used by Dr. Wilson. Perhaps, most prominently, is his inclusion of eastern mining operations with characteristics significantly different from Western Energy. As Dr. Wilson pointed out, these problems are in significant part, caused by the general unavailability of financial information for coal companies. (TR, Vol. IV, pp. 756-757) However, the Commission finds the criteria used by Dr. Wilson -- substantial coal operations and publicly available financial statements (TR, Vol. IV, p. 756) -- preferable to the biased criteria used by Mr. Gibbons.

135. Because of the difficulties inherent in finding truly comparable coal companies with which profit comparisons can be made, the Commission finds it reasonable, as a check to admittedly imperfect data, to look at other areas of the economy for profitability figures. Dr. Wilson presented evidence showing that other sectors of the economy earned between 10 and 14 percent. Of even more significance in the Commission's opinion, is the profitability of corporations denoted natural resource companies by Dr. Caroline Smith. (MCC Exh. CMS-5) That exhibit indicates that companies involved in natural resource operations enjoyed an average 18.6 percent profit in 1981. That information is not subject to Mr. Gibbons' criticisms of much of Dr. Wilson's testimony regarding both coal companies and other sectors of the economy.

136. It is an axiom in the financial community that the determination of what a reasonable profit is depends to a large extent on the risk involved in that particular business. The higher the risk, the higher the profits that investors expect to compensate for their risk of loss.

137. As noted previously, Dr. Wilson claimed that Western Energy, because of its relationship with MPC is a less risky proposition than other coal companies that do not have a guaranteed customer. (TR, p. 815) That claim was not contradicted by MPC, and in fact, the Commission takes note that in another docket, MPC has asserted that Western Energy is a relatively low risk proposition. (Docket No. 82.3.9, TR, pp. 101-102)

138. Taking all this information into account, the Commission concludes that nothing in this record suggests any reason why Western Energy should earn profits funded by MPC's ratepayers that are far above all but the most profitable coal operations and also far above other natural resource companies, many if not all of whom do not enjoy the risk reducing characteristics enjoyed by Western Energy. The Commission acknowledges the inherent difficulties involved in comparing Western Energy with other coal companies. Therefore, the Commission finds that MPC should be given the benefit of the doubt by use of more readily available information for natural resource companies. Based on all of the information presented, the Commission finds that fuel expenses claimed by MPC that reflect a 20 to 25 percent profit figure are excessive and should be reduced to reflect expenses that would yield profits to Western Energy of 18.6 percent.

139. The Coal Adjustment calculation is as follows:

	(000)
Equity-Financed Earnings Base	$47,834
Allowed Rate of Return	x .186
Allowed Return	$ 8,897
Actual Return	12,253
Excess (Net of Tax)	$ 3,356
Tax Multiplier	x1.4533
Excess	$ 4,877
MPC Percent of Sales	.1636
Excess on Sales to MPC	$ 798
Plus Pro Forma 1982 Increase	256
Test Year Adjustment for Captive Coal	$ 1,054
Western Energy Adj. Included in Interim Case	1,028
Adjustment to MPC's Interim	$ (26)

140. A substantial amount of information regarding MPC's captive coal operations was made available in this docket. For the first time it was revealed on an official Commission record that both coal reserves and the equipment used to mine the coal are, by contract, committed exclusively to that operation. (TR, Vol. I, pp. 97-101) In fact, the contract between MPC and Western Energy provides for payments to MPC, should Western Energy use dedicated equipment for purposes other than providing MPC's coal supply needs. In addition, the record reveals that coal reserves now held by Western Energy were purchased by MPC with the intent to use the coal for future power plants. (TR, Vol. IV, pp. 794-795)

141. In view of this information, there is a serious question as to whether the coal reserves used to provide coal to the Corette and Colstrip plants should not be considered part of utility plant. Logically, it seems difficult if not impossible to distinguish between coal supplies and natural gas supplies. The latter are part of the rate base and are provided to ratepayers at cost, including the cost of capital. Just as natural gas is the fuel used to provide gas service for ratepayers' utility service, so coal is the fuel used to provide electric customers with electric service. It is not clear to the Commission why one (natural gas) should be considered an integral part of utility service and the other (coal) should be considered a nonutility function whose ratemaking treatment is based on comparable profits and prices rather than the actual cost of service.

142. The different treatment of natural gas and coal seems to be an historical accident. In the case of natural gas supplies, it appears that MPC acquired them to serve the immediate utility market. By contrast, coal supplies were acquired with the intent of meeting MPC's electric demand, but purchased in advance of that demand.

143. The difference becomes important to electric ratepayers because of the different ratemaking treatment afforded under the present approach. Presently, MPC's natural gas supplies used by ratepayers are based on the cost of producing the gas, including a fair rate of return; because gas exploration and development is an integral part of the utility, it receives the same return as the utility. By contrast, the coal supplies purchased by MPC and subsequently transferred to Western Energy have been treated as nonutility activities, which, for ratemaking purposes are treated as if the activity is completely separate from the public utility.

144. Utilities are required to provide service at the lowest reasonable rate, and the Commission is required to allow rates that reflect the lowest reasonable costs. In view of those requirements, it is not at all clear to the Commission why, under the facts presented here, rates should not reflect the fact that coal reserves held by Western Energy were acquired by MPC for utility service, and why they should not, therefore, be treated the same as natural gas supplies developed by the utility. Under the present approach, ratepayers gain no advantage from the fact that the Colstrip coal reserves were acquired at a very low cost. (TR, Vol. I, p. 233) That acquisition price advantage goes entirely to MPC's shareholders. The Commission seriously questions this result, in

view of the mutual requirement of MPC and the Commission that utility service be provided at the lowest reasonable price. Had MPC not formed Western Energy, but simply held coal reserves it acquired in Plant Held for Future Use, there would be no doubt today that those coal supplies would be supplied to MPC's ratepayers at cost of acquisition plus operation and maintenance costs. It is not at all clear why this corporate decision should be allowed to raise ratepayers prices for electricity.

145. Because much of the information discussed has never been fully aired in the context of a contested rate case, the Commission will not make adjustments to reflect these preliminary conclusions. However, MPC should present evidence in its next electric rate case which addresses the issues raised in this discussion. Failure to do so will be viewed as a failure to file a sufficient application.

Fuel Expense

146. In order to comply with the Commission's Interim Rules, MPC proposed an adjustment to general fuel expense of $1,148,409 in their interim application. This adjustment was made to comply with the methodology approved by the Commission in the previous general electric order, Order No. 4714a of Docket No. 80.4.2. MCC further adjusted fuel expense to reflect actual September, 1982, price levels and Dr. Wilson's captive coal adjustment (MCC Exh. 1, pp. 10-11).

147. Mr. Hess proposed to update fuel costs to reflect actual September 30, 1982, price levels as opposed to the estimated fuel costs used by MPC in their interim filing. This updating resulted in an adjustment decreasing fuel expense by $997,000 (MCC Exh. 1, Exh. GFH-2, Sched. 2E). The Commission approves MCC's adjustment to the interim levels as it reflects accurate prices.

148. In its Interim filing, the Company attempted to make a captive coal adjustment using the same methodology approved in Order No. 4714a. Mr. Hess adjusted the Company's interim adjustment so that it was at the same level as that proposed by Dr. Wilson of MCC.

149. In determining the proper amount of fuel expense, the Commission added the updating adjustment of $997,000 and the captive coal adjustment of $26,000 (based on the amount of approved captive coal adjustment fully discussed in Finding of Fact Nos. 138 and 139) to the

Company's Interim adjustment to fuel expense of $1,148,000. The Commission, therefore, finds a decrease in fuel expense in the amount of $2,171,000 to be proper in this proceeding.

Fringe Benefits

150. Mr. Hess made some adjustments for fringe benefits to reflect 1982 cost levels to the 1981 test year employees. He made these adjustments because the Company "adjusted certain test year fringe benefits to the 1982 level in a manner which reflected the increase in the number of employees in 1982 as well as the increase in cost levels. ...The company should adjust test year expenses for known and measurable changes in cost levels but should not adjust for employees not required to perform test year functions" (MCC Exh. 1, p. 12).

151. The MCC adjustment for life insurance was an increase of $38,000 and for the payroll savings plan was a decrease of $62,000. During the hearing, Mr. Hess adjusted his adjustment to medical insurance to reflect updated costs resulting in a decrease of $116,000. Relative to his adjustment to pensions and benefits, Commission attorney Ms. Shore questioned Mr. Hess during the hearing about his $53,000 downward adjustment. Ms. Shore referred to the Company's response to Data Request MCC-19 concerning the number of employees who qualify for pensions and benefits. The response said that to be included in the January 1, 1982, computation an employee must have been in the employ of the Company for at least one year prior to January 1, 1982 (TR, Vol. IV, pp. 419-423). Mr. Hess responded:

> ...It is true that the employees that qualified for the plan as of January 1, 1982, were employed for the full year 1981 because that is a part of the qualifications; but I would disagree that 1981 should be adjusted for that fact because those -- There was not that number of employees qualified for the plan in 1981 as is indicated by the lower number at January 1, 1981. (TR, Vol. IV, pp. 422-423)

152. The Commission agrees with Mr. Hess that proper ratemaking treatment is to reflect known and measurable cost levels to test year employees, and the Commission has consistently regulated in this manner. The Commission, therefore, finds his adjustments to life insurance, medical insurance, and the payroll savings plan in the net amount of a $140,000 reduction proper in this proceeding. However, concerning his adjustment to pension and benefits, the Commission finds that

Mr. Hess' adjustment of $53,000 is improper in this proceeding due to the fact that, by definition, the qualifying employees on January 1, 1982, must have been employed during the entire test year according to the qualifications for receiving pensions and benefits. The resulting approved net adjustment for fringe benefits in this proceeding is a reduction in the amount of $140,000.

Computer Expense

153. During the Discovery Audit in Butte, Mr. Hess was told that the Company had adjusted test year expenses for the cost of leasing some computers which were not going to be leased. Mr. Hess, therefore, adjusted computer expense in the amount of $260,000. The Company accepted this adjustment in their revised exhibits provided during the hearing. Since this is not a contested item, the Commission finds the proposed decrease of $260,000 for computer expense to be appropriate in this proceeding.

Lobbying Expense

154. As a result of the Company's response to PSC Data Requests MPC-20 and 21, Mr. Hess proposed an adjustment to decrease lobbying expense in the amount of $163,000. The Company accepted this adjustment in their revised exhibits provided during the hearing. Since this is not a contested item, the Commission finds the proposed decrease of $163,000 for lobbying expense to be appropriate in this proceeding.

Property Tax

155. In their original filing, MPC proposed property taxes based on the taxable values at December 31, 1981, and the estimated mill levies for 1982 (MPC Exh. 1, p. WBS-17). During the hearing the Company adjusted their figures to reflect the actual 1982 property taxes paid. Mr. Slaughter explained;

> ...These reasons for the change in the property tax are one, a change in the mill levy from an estimated 240 mills in our original application to 234 mills on the actual tax basis.... Two, a change in the cost to market value factor from .73267 to .723809 which results from an adjustment made by the Department of Revenue.... Number

> three, the common plant was an estimated allocation for the original application. The actual allocation of common was determined, has been determined for the actual task.... These three items, then, account I think for the $604,000 reduction in the property tax. (TR, Vol. II, p. 661)

156. In their application for interim relief, the Company "calculated test year property taxes by applying the 1982 estimated mill levy to the 1981 taxable value" (MCC Exh. 1, p. 12). Mr. Hess proposed to adjust the level of property taxes as presented in MPC's interim relief filing. Mr. Hess explained:

> I use the composite actual 1982 mill levies known as of November 20 (1982). However, there was another known change which was not reflected in the interim property taxes. In 1982 the market value ratio applied to cost to obtain market value was increased from .67430 to .73267. Therefore, I adjusted the 1981 taxable value for this change in market value ratio. These two changes increased property taxes by $1,282,000 above the level included in the company's interim case. (MCC Exh. 1, pp. 12-13)

157. During the hearing Mr. Hess further adjusted his exhibits to reflect MPC's revised data and proposals. Hess testified during questioning by Mr. Allen of MCC:

> A. Mr. Slaughter revised 1982 income taxes in his testimony. Although I would not suggest using 1982 taxes for the 1981 test year, using the same approach that I used in my exhibit, namely, to adjust 1981 property taxes for known and measurable changes based on current data, reduces my allowance for property taxes by $728,000.
>
> Q. Excuse me, Mr. Hess. That last adjustment was for property taxes; is that correct?
>
> A. That is correct. (TR, Vol. 111, p. 393)

158. Because this case is based on adjusted 1981 test year data, the Commission views Mr. Hess' approach of using 1981 taxable value and 1982 actual mill levies as most accurately portraying 1981 data adjusted for known and measurable changes. The Commission finds, therefore, that the MCC adjustment in the amount of $554,000 as an increase to MPC's interim level property taxes is proper in this proceeding.

Allocation

159. The Company adjusted test year plant in service and associated expenses for a new allocation of common plant which was approved by the Commission in MPC's last gas case, Docket No. 81.6.57. Mr. Hess, however, felt that the adjustment was not properly applied to all related items. As a result of the Company's response to Data Request MCC-23, Mr. Hess proposed an adjustment to correct the Company's allocation error. Mr. Hess' allocation adjustments resulted in a $25,000 increase in deferred income taxes, a $111,000 decrease in federal income taxes, and a $16,000 decrease in Montana Corporation License Tax (as well as a $106,000 decrease in Rate Base) (MCC Exh. 1, Schedule 2, p. 3 of 3). The Company accepted this adjustment in their revised exhibits provided during the hearing. Since this is not a contested item, the Commission finds the proposed $25,000 increase in deferred income taxes, $111,000 decrease in federal income taxes, and $16,000 decrease in Montana Corporation License Tax to be appropriate in this proceeding.

Pro Forma Interest Expense

160. In its filing, the Company made a calculation of interest expense. Mr. Hess of MCC used basically the same methodology as that used by MPC, but substituted his calculation of rate base and Dr. Smith's weighted cost of long-term debt for those of the Company. Mr. Hess excluded interest on customer deposits in his calculation and MPC included that interest. The Commission agrees with Mr. Hess that interest on customer deposits should not be included in this computation as it does not represent construction debt. The Commission finds that a pro forma interest adjustment is proper to reflect the tax effect of interest on construction. By utilizing the approved rate base and weighted cost of long-term debt in the methodology, the Commission finds an increase to Montana Corporation License Tax in the amount of $50,000 and an increase to Federal Income Tax in the amount of $320.000 to be proper in this proceeding.

Salaries Expense

161. An often-voiced concern of consumers in public testimony during satellite hearings for this Docket were the level of salaries and increases for the officers of MPC. Many consumers expressed great disappointment that the Company had not made an effort to hold executive salary levels to reflect bad economic times which have prevailed over the last couple of years, and asked the Commission to consider the matter closely. During the hearing, MPC's policy witness, Mr. Burke, distributed a schedule of officers' salaries from January of 1979 through January of 1983. The schedule showed, for example, that in January of 1982, J.A. McElwain, Chairman and Chief Executive of MPC, was being paid an annual salary of $150,000. In January of 1983, Mr. McElwain was being paid an annual salary of $175,000, an increase of $25,000 in a year, or 16.67 percent. During the hearing, Commissioners Jarvis and Driscoll extensively questioned Mr. Burke about officers' salaries and salaries expense in general. During questioning by Commissioner Jarvis, Mr. Burke indicated that fuel cost and salary expense should not be necessarily compared because of the difference in magnitude of the expenses (TR, Vol. 1, pp. 138-139). Mr. Burke indicated that the principle reason for such salary levels among officers was compensation planning comparisons with similar levels of responsibilities in other utilities, and some other organizations in the region (TR, Vol. 1, pp. 136-138).

162. The Commission recognizes that the amount of officer salary increases in this case are different for ratemaking purposes than the actual figures because of allocation to electric, annualization, and the labor expense methodology in this proceeding. The Commission, however, believes that a strong message must be sent to MPC that such officer salary increases fail to reflect the severe economic conditions under which consumers have been struggling. The Commission also notes that large officer salary increases seem unwarranted considering the fact that the inflation rate has decreased considerably during the past year. If stockholders are rewarding top executives for increased productivity and resulting increased profits in troubled economic times, then it seems only reasonable that just as they share in the rewards or profits, so must the owners assume a fair portion of the burden of increased officer salary levels that the stockholders deemed justified for their increased return on investment. The Commission is satisfied that the present base salary levels are adequate to attract competent officers to work for MPC. Any officer salary increases desired by the

owners should be made up from productivity gains or from the stockholders themselves. The Commission, therefore, determines that the total disallowance of increase in officers' salaries over the annualized amount in the case, in the amount of $56,000, is proper in this proceeding. The following table shows the calculation of this downward adjustment:

Actual Labor Cost-1981		
Officers	$ 592,808	
Other Non-Union	15,789,825	
Union	12,185,727	
Total		$28,568,360
Actual Annualized (Average)		
Officers	$ 606,028	
Other Non-Union	16,141,184	
Union	12,904,322	
Total		$29,651,534
Annualized Projected		
Officers	$ 606,028	
Other Non-Union	17,555,125	
Union	14,014,811	
Total		$32,175,964
Total Deductions		(2,211,812)
Total Additions		2,013,665
Add Allocation Adjustment		
Officers	$ 88,823	
Other Non-Union	1,588,585	
Union	130,782	
Total		$ 1,808,190
Total		$33,786,007
Less Yellowstone Park		(187,998)
Test Period Labor Cost		$33,598,009
Original MPC Test Period Labor Cost		33,654,292
Total Labor Adjustment		$ (56,283)

Other Issues

Coal Losses

163. Anthony Yankel a witness for the Montana Irrigators, Incorporated, filed testimony relating to the 2 percent coal loss factor claimed by the Applicant. Mr. Yankel testified: "I believe that a 2% loss is excessive to the point of being unrealistic." (Direct, p. 24) The loss factor

questioned by Yankel has to do with coal shipped to the Corette plant from a Western Energy Company mine located at Colstrip. Yankel assumed that there is 125 miles of railroad track between the mine and the Corette plant. Both Yankel and MPC witness Woy were asked if they could provide data related to industry averages for coal losses. Neither witness was able to shed any light on the matter.

164. The Commission finds no adjustment to the 2 percent loss factor for Corette coal losses to be proper in this Docket based upon the evidence on the record. However, the Commission shares Yankel's concern about where the 2 percent is being lost. The Commission directs the Applicant to provide the weights at the mine and at the Corette plant of the coal burned during the test year in the next electric rate case. MPC should evaluate this loss factor before the next case with an eye toward improving measurement and explaining the loss.

Deferred Accounting Proposals

165. MPC proposed the adoption of the Power Cost and Credit Deferred Accounting Procedure, a feature of the rate schedules that the Company proposed in Docket No. 80.4.2. Four witnesses presented testimony on the Deferred Accounting Procedure for MPC (Woy, Pederson, Gregg and Goeddel). Woy testified that after rates are set, actual conditions can cause significant variations in both power costs and sales revenues. While the Applicant would report the activities in the accounts to the Commission on a monthly basis Woy recommended using a full 12 months of historic data to balance the deferred account (Direct p. 12).

166. Pederson presented the accounts which would be used for the Deferred Accounting Procedure in his testimony. Pederson cited the Accounting Principles Board's Opinion 2 and gave his opinion that the Deferred Accounting Procedure is in accordance with generally-accepted accounting principles (Direct, p. 6).

167. Gregg presented testimony that his role was to identify those resource costs and power sale revenues which should appropriately be included in the Power Cost and Credit Deferred Accounting Procedure. After explaining the criteria used to include items in the Deferred Accounting Procedure, Gregg listed the resource costs and credits proposed by MPC:

The costs:

fuel costs;
purchased power costs, including payments made to cogenerators and small power producers;
interchange costs;
wheeling costs;
hydroelectric rental costs; and
water for power costs.

The credits:

revenues from out-of-state sales;
revenues from sales of water and water power;
wheeling revenues;
a credit based on the Montana utility system cost of delivering power to Yellowstone National Park;
revenues from Colstrip Units #1 and #2 Transmission Agreement;
the power cost and credit component of all the sales made subject to the jurisdiction of this Commission; and
the power cost and credit component of the FERC jurisdictional sales. (Direct, pp. 19-20)

168. Goeddel presented testimony (sponsored at the hearing by Cook) which explained the mechanics of how the Deferred Accounting Procedure as proposed would work.

169. Champion International and Conoco Inc. (CICO) proposed the adoption of a fuel and purchased power cost and credit recovery mechanism. Two witnesses presented testimony on the cost and credit recovery mechanism for CICO, Rush and Olsen. Rush advocates a cost and credit recovery mechanism which would recover only the actual costs, net of credits, related to fuel and purchased power. In his testimony, Rush describes how this mechanism would work:

> This fuel and purchased power component should be composed of two parts: (1) a fuel/purchased power/credit component and (2) a reconciliation component. The fuel/purchased power/credit component should be expressed on a cents per KWH basis. To compute the fuel/purchased power/credit component the includable costs less the includable credits (as described in the definition section of my testimony) are projected for the next six month period. This cost is then divided by the projected kilowatt hour sales to the Montana jurisdictional customers to arrive at the fuel/purchased

> power cost/credit component. The fuel and purchased power/credit component would also include a reconciliation component, expressed on a cents per KWH basis. The reconciliation component includes the actual includable costs less the actual includable credits (as described in the definition section of my testimony) for the previous six month period netted against the actual revenues received from the Montana jurisdictional customers for the previous six month period resulting from the fuel and purchased power component included in the retail rate. This net cost/credit balance plus any other Commission ordered refund or recovery is then divided by the projected number of kilowatt hours used to compute the fuel/purchased power cost component for the period when the reconciliation will take place. The fuel and purchased power/credit component is a cost per KWH value that is equal to the sum of the fuel/purchased power/credit component and reconciliation component. (Direct, pp. 8-9)

170. Rush recommends hearings every six months to ensure that rates being charged under the mechanism are fair, just and reasonable. Another feature of the CICO plan is annual audits to be performed by an independent auditing firm or the Commission staff. In order to proms the utility to aggressively seek to minimize net costs, Rush suggests that the Commission may desire to include an incentive provision in the mechanism.

171. Olsen, a witness for CICO, presented testimony in support of the adjustment proposed by Rush. Olsen urged the Commission to have the mechanism in place when Colstrip Units #3 and #4 become operational. Since projections indicate that MPC will be in a position to sell substantial power to others, Olsen testified that there should be a proven mechanism already in place to guarantee the flow through of the resulting profits to the ratepayers.

172. MCC has taken a position against a deferred accounting procedure. Hess testified that:

> The proposed deferred power supply cost accounting removes a major incentive for the utilities management to hold down costs. When management knows that increased costs are going to affect the income they earn for their stockholders, they are likely to work diligently to avoid or at least minimize such cost increases. But if the Commission adopts deferred power supply cost accounting, increased power supply costs will have no effect on stockholder's earnings, and, thus, the incentive to avoid higher costs is diminished. (Direct, p. 15)

173. The Commission is considering the issue of a deferred accounting procedure in Montana Power's electric operations for the second time. The issue was first raised by MPC in Docket No. 80.4.2. Large amounts of off-system sales have been made by MPC in recent years. As a result, MPC was able to defer filing the present rate case. If a deferred accounting procedure had been in effect since 1979 for example, ratepayers would have received credit for the large amount of off-system sales and MPC would have filed the present rate case earlier.

174. CICO proposed using six months of projections as the basis of the cost and credit recovery mechanism. This Commission has consistently rejected projections as being imprecise and therefore not a proper basis for setting rates. The factor which limits the error associated with these projections its the six-month time frame. One factor which CICO failed to consider in making its proposal was the substantial burden it would impose on the Commission. If this proposal were implemented for the major electric utilities in the state, the Commission would have six additional rate cases every year in addition to the already heavy caseload.

175. After a careful review of this issue the Commission declines to implement a deferred accounting procedure at this time for two reasons:

(1) The Commission has the concern expressed by MCC witness Hess that utility management would have less incentive to control costs if such a mechanism was to be implemented.

(2) Since Colstrip Units #3 and #4 are scheduled to go into service in the next two years, the Commission will certainly have rate cases in which power costs and credits will be evaluated.

However, the Commission may consider implementation of a tracking mechanism after the Colstrip #4 rate case.

Revenue Requirement

176. The following table shows that additional annual revenues in the amount of $31,932,000 are needed by the Applicant in order to provide the opportunity to earn a return of 11.63 percent:

MONTANA POWER COMPANY

Revenue Requirement
1981 Test Year
(000)

	Company Per Books 1981 Adjusted	Company Interim Adj.	MCC Adj. to Interim	Other Intervenor Adj.	PSC Adj.	Total Accepted Adj. to Col. 3	Accepted Pro Forma	Increase Required to Produce 11.63% Return	Total
Operating Revenues	$180,983	$ 1,815	$39,651	$ 7,253	$ 0	$ 8,541	$189,524	$31,932	$221,456
Operating Revenue Deductions									
Purchased Power	26,651	42	2,500	4,073	2,865	2,907	29,558		29,558
Fuel	26,328	(1,148)	(1,319)		(1,023)	(2,171)	24,157		24,157
Other O&M Expenses	64,483	0	(616)		(619)	(619)	63,864		63,864
Total O&M	117,462	$(1,106)	$ 565		$ 1,223	$ 117	$117,579		$117,579
Depreciation & Amort.	16,232	0	0		0	0	16,232		16,232
Investment Tax Credit Deferred	0	0	0		0	0	0		0
Amort. Of Invest. Tax Credit	(531)	0	0		0	0	(531)		(531)
Deferred Income Taxes	6,947	0	25		0	25	6,972		6,972
Taxes Other Than Income	17,177	(1,391)	577		558	(833)	16,344	19	16,363
Federal Income Taxes	(9,094)	1,850	14,043		2,329	4,179	(4,915)	13,689	8,774
Montana corp. License Tax	(1,241)	291	2,212		369	660	(581)	2,154	1,573
Total Revenue Deduc.	$146,952	$ (356)	$17,422		$ 4,479	$ 4,148	$151,100	$15,862	$166,962
Utility Operating Income	$ 34,031	$ 2,171	$22,229		$ (4,479)	$ 4,393	$ 38,424	$16,070	$ 54,494
Amortization of Profit on Debt Reacquired @ Discount	26	0	(26)		0	(26)	0	0	0
Balance for Return	$ 34,057	$ 2,171	$22,203		$ (4,479)	$ 4,367	$ 38,424	$16,070	$ 54,494
Rate Base	$468,742	$ 0	$ 216		$ (180)	$ (180)	$468,562	$ 0	$468,562
Base of Return	7.27%						8.20%		11.63%

PART E

RATE DESIGN

177. Interruptible Rates. Phase II of Docket No. 80.4.2 had as one objective the consideration of ratemaking standards, one of which was interruptible rates (see Public Law 95-617, Sec. III). In Order No. 4714d of the above docket the Commission set forth a summary of the record on the issue of interruptible rates. In Order No. 4714d (Finding Nos. 98 and 99) the Commission found that the value of interruptible energy and capacity savings clearly correlates with avoided cost concepts; the Commission further provided an equation for computing the interruptible credit.

178. Additional questions remained (Order No. 4714d, Finding No. 94) on the design and economic basis of interruptible rates including: 1) whether the MPC is capacity deficient and/or whether interruptibility displaces energy demands and 2) whether an interruptible rate schedule should be tailored to each specific load. In the instant proceeding the Commission would add that there clearly exists four permutations of possible interruptible rates: short and long-run energy and capacity payments.

179. In the instant proceeding MPC and the intervenor Stauffer Chemical Company submitted testimony on the issue of interruptible rates. Neither party appears to contest the fact that interruptible consumption conceptually leads to the avoidance of at least demand costs. At issue is the quantification of avoided demand costs. The MPC's position is that at present it is inappropriate to develop and file an interruptible rate as the Company's resource plan indicates no need to acquire any peaking facility additions for the remainder of this decade. Implicit in this position is that the value of marginal or avoided demand is not greater than zero (see Exh. No. 4, p. EPL-2, 11. 19-22).

180. Stauffer Chemical's position is that MPC's resource plan, with no capacity shortage for the balance of this decade, is not sufficient reason to defer consideration of interruptible rates. Stauffer, however, provides no empirical evidence on interruptible cost savings and fails to rebut the MPC assertion that demand, at the margin, currently has no value.

181. Given the lack of evidence in the record in Docket No. 82.8.54, the Commission finds no basis for tariffing an interruptible rate(s) at the present time.

182. In Order No. 4714d the Commission specified an equation for computing the interruptible credit. This equation is simply the avoided cost minus the interruptible customer's retail rate. The Commission notes that the first component in this equation is one topic of the current avoided cost rate proceeding (Docket No. 83.1.2); that is, the value of short and long-run peaking capacity ($/kw) will be established in this proceeding.

183. A factor which obscures the proper design of an interruptible rate is the existing transmission level-of-service rate schedule. It is certainly not obvious, given the District Court stay of Order No. 4714d, that Stauffer's existing rate provides firm service at greater cost than a properly designed interruptible rate schedule -- regardless of the calculation of marginal demand costs. In that Stauffer's existing rate features no known cost basis and even fails to recognize the seasonal value of demand, leaves little merit in attempting to refine the schedule to incorporate the (yet unknown) value of interruptibility.

184. A second factor that obscures the proper design of interruptible rates is clear identification of transmission level loads that may actually serve as resources for the system. The Commission therefore finds that a series of meetings should be held between representatives of the utility, interested transmission level customers, and other interested persons, for the purpose of clarifying the design characteristics of the utility system, and the potentially beneficial characteristics of large industrial loads. The meetings should be sufficient and timely enough to provide the Commission with a report signed by the participating parties, which might be useful in the proceeding associated with Colstrip #3. The report should be sent to all parties in this docket.

185. In summary, the Commission finds that, after the implementation of cost-based transmission level rates, the burden is on Stauffer (or any other intervenor) to empirically demonstrate the value of avoided demand. The anticipated Colstrip 3 rate proceeding, in the fall of 1983, is one forum in which cost-based transmission rates may be established. Industrial customers are, of course, also free to file a complaint requesting an interruptible rate.

186. Lighting Rates And Conversion Study. In Order No. 4714d the Commission identified four areas in which the lighting costing/pricing mechanism was deficient, including: 1) "the allocation of administrative and direct assignment costs to the lighting schedules"; 2) "the

amortization of plant and resulting endless stream of facilities charges, despite inefficient lighting districts dating back 50 years"; 3) "the fixed dusk to dawn, 9,000 hours of annual burn at a time when the consumer is willing to reduce consumption" and 4) "incandescent lighting at a time when maintenance is costly and high pressure sodium vapor (HPSV) results, in some cases, one-fourth the energy consumption." Pending an outcome of these issues the Commission opted to maintain the then existing rate design and to not increase rates over those resulting from Order No. 4677a (the so-called Settlement Proceeding).

187. In response to the Commission's requests, MPC filed (November of 1982) preliminary lighting rates and conversion studies. On the opening day of the hearing, in the instant proceeding (February 1, 1983), MPC submitted its direct testimony in the matter of lighting rates and conversion. Finally, on April 25, 1983, the Company submitted, for discussion purposes, rates for street, area, metered and flat-demand related lights.

188. Although no formal intervenor submitted testimony on MPC's lighting studies, numerous cities (Anaconda, Butte, Billings, Helena and Missoula) provided public testimony on MPC's lighting studies. In response to requests by the cities for additional time to analyze and comment on MPC's direct testimony (submitted on February 1, 1983), the Commission allowed all parties until March 2, 1983 to submit comments. The concern of the cities is one factor influencing the Commission's decisions in the instant proceeding.

189. The MPC's preliminary lighting rates and conversion studies addressed the four issues raised by the Commission in Order No. 4714d (see Finding No. 186 above). However, given the exhaustive detail in the Company's lighting rates study, and that the final rates were not received until April 25, 1983 the Commission finds that it would be premature to implement rate design and rate changes at the present time. The Commission prefers to consider and implement the rate design and rate changes in the Colstrip 3 rate proceeding. This decision will allow the cities additional time to analyze the MPC's April 25, 1983 rate filing. In addition, postponement until the Colstrip 3 proceeding will allow for parity in the timing of cost studies on which rates are based (the moderating factor in the instant proceeding consists of a mix of 1979 and 1981 billing determinant data).

190. The Commission finds that certain issues identified in Order No. 4714d to be resolved. The use of the National Economic Research Associate's (NERA) marginal cost (MC) methodology renders moot the amortization of plant and the resulting endless stream of facilities charges. Additionally, the 30 percent A&G multiplier per the NERA MC method as applied to O&M expenses resolves the issue of allocating administrative and direct assignment costs.

191. The annual hours of burn issue, however, has yet to be resolved. The Commission finds this issue to be intertwined with the issue of seasonally differentiated rates. MPC's position is that rates should be based on a fixed 4,200 hours of annual burn; and, given perfectly inelastic demand, there is no need for seasonally differentiated rates: the circularity in reasoning is complete. The cities are unanimous on the annual hours of burn issue: they want on/off control; there is not unanimity, however, on the issue of seasonally differentiated rates.

192. The Commission finds that this issue requires further scrutiny in a later proceeding. To the extent rates are not seasonally differentiated, the cost effectiveness of on/off controls is clearly affected: winter rates, assuming seasonal differentiation, would be greater than summer rates and the winter hours of burn are longer than in the summer. These two factors combined support the logic of seasonally differentiated rates.

193. In order that the cities may include in their long-range plans decisions regarding the cost-effectiveness of on/off controls and HPSV conversion, the Commission requests that MPC provide each participating city in Docket No. 82.8.54 (and any other city that may make a request) a set of illustrative tariffs such as was submitted to the Commission April 25, 1983. The tariffs, however, should feature seasonally differentiated energy rates per kwh with winter rates 20 percent greater than summer rates. In addition, the rates should reflect the final revenue increase approved in the instant proceeding as well as the increase that should have resulted from Order No. 4714d as a result of cost-based pricing. Although these rates will not be approved in the instant proceeding, the Commission finds that such information should illuminate for the cities the level of rates that could be in effect had the company filed in a timely manner.

194. In addition, the Commission finds that the MPC negotiate with the municipalities any requests for on/off controls. Negotiations should be flexible taking into account the characteristics

of each city and allow for: 1) city financing of on/off controls (with usage not necessarily metered though measured with reasonable accuracy); 2) utility ownership of controls; and 3) utility servicing of improvements.

195. The Commission advises MPC that consideration will be given to grandfathering the offerings of area lighting services in the Colstrip 3 rate proceeding. Such a proposal was made by Pacific Power and Light in a recent rate proceeding (see Docket No. 81.8.70).

196. HPSV Conversion. In its final comments MPC proposed to convert all Company-owned street lights to HPSV. The MPC's in-house study, on the cost-effectiveness of HPSV conversion (Exh. No. 5), however, indicates that all Company-owned street lights should not be converted to HPSV.

197. The cities are not unanimous on the percent of the Company-owned street lights that should be converted to HPSV. Representatives from Butte and Anaconda indicated that certain new mercury vapor street lights should not be converted.

198. The Commission finds that lights should be converted on the basis of cost effectiveness criteria. MPC should proceed on a prioritized basis (most cost effective to least cost effective) to convert the Company-owned street lights to HPSV. This program should take place over the seven year period as proposed by MPC. Ample opportunity will arise during this seven year conversion program to reevaluate the cost effectiveness of converting the subset of, for example, new mercury vapor lamps identified by the representatives of Butte and Anaconda. The MPC is authorized to depreciate the unamortized plant over a seven year period.

199. On April 14, 1983 the Commission approved, on a temporary basis, the grandfathering of mercury vapor and incandescent area lights and the tariffing of HPSV rates for area lights. The Commission approves these rates on a permanent basis. The "Availability" paragraph of the Street and Area Lighting Efficiency Improvement Program II contract, however, includes, in addition to area lighting, street lighting. Unless a subsequent contract excluded street lights from the grandfathering requirements, it appears to the Commission that MPC should have included street lights in the April 4, 1983 request. Clarification on this point is requested.

200. Nothing in this order shall prevent MPC from converting technologically obsolescent lights to more efficient lights than HPSV should the state-of-the-art change in the next seven years. Additionally, if practicable, MPC should include the necessary on/off controls with the new HPSV installations and with HPSV conversions.

201. Rate Design Changes. In its Opening Brief the Anaconda Minerals Company and Stauffer Chemical Company proposed that:

> The proposed electric contract service schedule should be revised to include a uniform intraclass rate design for all of the customers served under proposed schedule EC-82.

202. The request is denied. The Commission's November 15, 1982 notice limited the rate design issues to street light and interruptible rate issues.

203. Rate Decrease. As the final revenue increase equals $31,932,000, a reduction in the interim rates is required. The MPC is directed to file tariffs and workpapers verifying a uniform percent increase from the pre-interim revenue level reflecting the final revenue increase. In addition, the tariffs stayed by the District Court must also be refiled reflecting the final increase in the instant proceeding.

204. Rebates. The Commission finds that for other than the Electric Contract customers, the rebate amount for each class shall be computed by dividing the rebate balance accumulated for each class during the period the interim rate were in effect by the kwh consumption for each respective class during an equivalent period of time beginning with the effective date of this order.

205. For the Electric Contract customers the Commission finds that the actual accumulated balance should be rebated on an individual customer basis; moreover, the rebate should be a one-time up-front payment.

206. Exchange Credit. Due to the current magnitude of the BPA exchange credit, in combination with the existing negative surplus, the Commission finds reason to suspend the credit. This decision, however, does not prevent the Commission from tariffing an exchange credit in the future.

207. Any proposed finding of fact not adopted or rejected by the preceding findings are hereby rejected as incorrect or irrelevant.

CONCLUSIONS OF LAW

1. The Applicant, Montana Power Company, furnishes electric service to consumers in Montana, and is a "public utility" under the regulatory jurisdiction of the Montana Public Service Commission. MCA § 69-3-101.

2. The Commission properly exercises jurisdiction over the Applicant's rates and operations. MCA § 69-3-102, and MCA, Title 69, Chapter 3, Part 3.

3. The Commission has provided adequate public notice of all proceedings and opportunity to be heard to all interested parties in this Docket. MCA Title 2, Chapter 4.

4. The rate level and rate structure approved herein are just, reasonable, and not unjustly discriminatory. MCA § 69-3-330.

ORDER

1. The Montana Power Company shall file rate schedules which reflect increased annual revenues of $31,932,000 in lieu of, rather than in addition to, interim rates. The total annual revenues of Montana Power Company will be approximately $221,456,000.

2. Pursuant to Finding of Fact No. 93, if there is a noticeable increase in the market price for off-system sales, or if MPC successfully negotiates any firm contracts for off-system sales, the Company must file with the Commission an application reflecting those improved market conditions or negotiated contracts.

3. Pursuant to Findings of Fact No. 99, in the next rate case filing the Company must present a refined study of system losses in order for that future filing to be accepted by the Commission.

4. Pursuant to Finding of Fact No. 164, MPC must evaluate the coal loss factor before the next rate case filing with an eye toward improving measurement and explaining the loss. This improvement must be incorporated into the next filing in order for that future filing to be accepted by the Commission.

5. The Montana Power Company's final rate calculations are to be supported by working papers showing: 1) test year sales per schedule for each season and rate; 2) Docket No. 82.8.54 final rates; and 3) the product of 1) and 2) above, summed, equaling the total revenue requirement, less the existing revenue requirement.

6. The Montana Power Company is to refile the stayed compliance rates that resulted from Phase II of Docket No. 80.4.2 that reflect the final increase in the instant docket. Working papers should also accompany this tariff filing.

7. The Applicant is to file tariffs that exclude the BPA exchange credit.

8. The increased rates authorized herein shall be effective upon the filing and approval of revised tariffs consistent with this order.

9. Rate schedules filed shall comport with all Commission determinations set forth in this Order.

10. The Montana Power Company is directed to submit detailed workpapers verifying the magnitude of the rebates to each customer class; for Electric Contract customers the working papers should be further disaggregated by the individual customers.

11. All motions and objections not ruled upon are denied.

DONE AND DATED this 10th day of May, 1983, by a vote of 5-0.

BY ORDER OF THE MONTANA PUBLIC SERVICE COMMISSION.

_____
THOMAS J. SCHNEIDER, Chairman

_____
JOHN B. DRISCOLL, Commissioner

_____
HOWARD L. ELLIS, Commissioner

_____
CLYDE JARVIS, Commissioner

_____
DANNY OBERG, Commissioner

ATTEST:

Madeline L. Cottrill
Secretary

(SEAL)

NOTE: Any interested party may request the Commission to reconsider this decision. A motion to reconsider must be filed within ten days. See 38.2.4806, ARM.